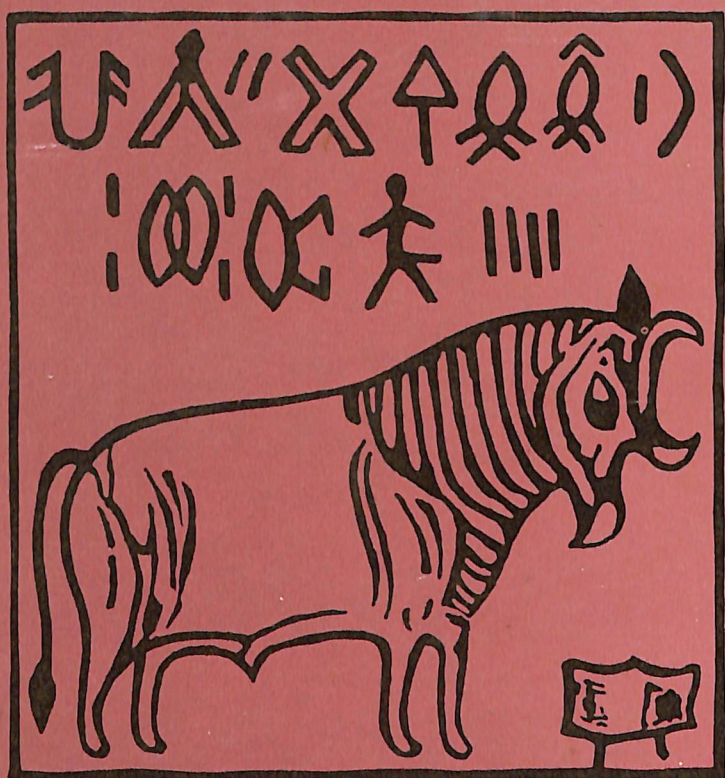


AHMAD HASAN DANI



INDIAN
PALAEOGRAPHY

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BY

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To

PROFESSOR A. L. BASHAM

who inspired me to write the book

and to

my late lamented teacher

PROFESSOR A. S. ALTEKAR

who guided my steps into the field of

Palaeography and Indology

FOREWORD

THE study of Indian palaeography began nearly 180 years ago with the interpretation of a number of medieval inscriptions by members of the Asiatic Society of Bengal. During the last century knowledge of ancient Indian scripts progressed rapidly, until practically all the epigraphs of the sub-continent were intelligible. About sixty years ago the accumulated knowledge of over 100 years was consolidated in Bühler's *Indische Paläographie*, which became the standard textbook on the subject. Since its appearance the only similar work of major importance to be published was Professor G. S. Ojha's *Bhāratiya Lipimālā* (1918) in Hindi. In the last forty years many new inscriptions have been published, and the technique of the palaeographer has much advanced; hence both books are now out of date in many respects. Moreover, both have long been out of print, and the student of Indian palaeography has been much hampered by the impossibility of obtaining a suitable manual for use outside the library reading-room.

My friend Dr. A. H. Dani has rendered a great service to Indology in producing this detailed study. Taking into account the many epigraphs not available to Bühler and Ojha, he has given a more complete survey of the evolution of the Indian scripts than any earlier scholar, and has brought the study of Indian palaeography to a degree of precision well beyond that reached by his two predecessors. His charts show many forms not recorded in those of the earlier scholars, and his text is the result of much original thought and study.

Our knowledge of early Indian history depends very much on epigraphs, many of them undated. Thus this work is of great importance to the historian, and will long remain an essential companion to his studies. It is to be hoped that Dr. Dani will continue his researches and produce a second volume, covering the medieval period, and providing a complete survey of Indian scripts down to recent times.

It is particularly gratifying that this is the work of a Muslim scholar. Many Hindus have in the past studied the 'Muslim Period' of Indian history, and have produced works of major

importance on it, but hitherto no Muslim has made a major contribution to the study of the history of the subcontinent before the coming of Islam. It is to be hoped that other Muslims will be encouraged by this work to take up the study of ancient Indian history, and of the culture of the people who were their own ancestors, as they were the ancestors of the Hindus. This may well be the first of many studies of early India from Muslim scholars, and a token of developing friendship and cultural collaboration between India and Pakistan.

A. L. BASHAM

London, 1961

PREFACE TO THE SECOND EDITION

AS the first edition of the book was long out of stock, it was found desirable to make copies available to scholars. Although there is a need of revising the main text in view of several new discoveries, no attempt has been made to alter the text. This was primarily because the main thesis remains the same and the methodology, propounded here, deserves to be applied to new material. However, there are some points on which, I hope, younger scholars will pay greater attention. In this preface I will try to throw some light on these issues.

1. The first important issue is about the origin of the Indian alphabet. Brāhmī certainly has the precedence. My new study on *Taxila* has convinced me that Brāhmī was not a stranger in this part. Right from the time it appeared on the local coins in the second century B.C., it continued to be used though occasionally. Kharoshthī was evolved for foreigner's use on Indian phonetic system, the roots of which lay in Brāhmī. There is a need to build a complete history of the evolution of Indian phonetic system based on earlier grammarians. If this system is properly understood, the special character of the Brāhmī alphabet, particularly its vowel system, will be clear. The vowel sounds have special role to play even in Vedic recital. How did they systematise that sound system? I have not been able to work out the detail. I am convinced that the system is different from Semitic. Hence for the origin of Brāhmī we should look elsewhere.

2. The discovery of large number of inscriptions along the Karakorum Highway has changed the whole perspective of the spread of Indian writing system. Our present concept of geographic nomenclature does not seem to hold good any more. There is need to discover different schools and the masters who founded those schools. They dictated the character of one or the other style and the scribes followed them as far as it was possible for them to do so. The hand writings are only attempts to conform to the set character.

3. *Indian Numerals*

And finally our numerals still remain to be understood in their

true nature. The recent book on *Indian Numerals*, Poona, 1966, by Dr. Shobhana Laxman Gokhale does not improve the situation, although she has painstakingly collected together all the symbols and made additions to what was earlier done by G. Bühler in his *Indian Palaeography*. My original intention was to write a separate book on this subject but I never got an opportunity to do so. Here I briefly state my ideas for the younger generation of scholars to work the detail.

Dr. Shobhana has summarised the earlier views. I have reclassified the charts given by her and Bühler and am appending here my reconstructed chart.

The difference in the charts lies in the main concept. I am trying to discover the main principle underlying the Indian numerical system. The ideas, so far propounded, that some of the symbols represent alphabetical forms, like *tha*, *gra*, *hra*, *la*, etc., are fantastic, unconvincing and unreasonable. They have not led to formation of any system. On the other hand the European scholars have tried to borrow the symbols from the Semitic world. This is also not convincing as the local system is entirely different. In order to make the issue clear I have placed the Kharoshthī and Brāhmī symbols side by side. The last row gives the modern Hindi shapes as evolved from Brāhmī.

Both Brāhmī and Kharoshthī numbers accept the units of *four*, *ten*, *twenty* and *eighty*. I will try to show how these units are expressed in the symbols actually used. But before that is explained, it must be emphasized that the above units are clearly derived from human limbs: four hands, ten fingers or twenty fingers, and four twenties make eighty. This is absolutely clear in Kharoshthī numerals, which are based on quaternary system; e.g. four, four plus four make eight, four twenties make eighty. But disparity lies in ten and twenty. Here the unit is actually twenty, and not ten, although the basic form is of ten, which is clearly a fishhook sign, that stands for the first letter 'a' in Kharoshthī. This extra use of the symbol of ten is due to influence from other system. I maintain that this was due to the influence of the system in Brāhmī, although Brāhmī has its own particular characteristic. It is under the influence of Brāhmī that the signs for hundred and thousand have been formed in Kharoshthī. It is wrong to say that the Kharoshthī hundred has the form of Brāhmī *ta* (𑀮). Actually it is the unit of ten with an inclined stroke on the left:

$$/(+) \gamma = h \text{ or } \angle$$

To this composite symbol can be added signs for one, two, three, etc. to make it one hundred, two hundred, three hundred, etc.

Similarly symbol for one thousand, as taken from Rapson's chart, is clearly borrowed from the Brāhmī form of a circle.

Now for the symbols of the first four numbers—one, two, three and four—are the same in both, with the difference that Kharoshthī has vertical lines while Brāhmī has horizontal lines. The symbol for four is a cross, whether Roman cross or Maltese cross. The Brāhmī symbol is also a cross. It does not represent any alphabet, as has been supposed so far. The variation on the top head is due to different hands. So far comparison between Brāhmī and Kharoshthī holds good. But hereafter there is a complete departure in the system of Brāhmī.

In Brāhmī the unit now becomes ten, which is actually a semi-circle or semi elliptical, to which a handle is added to the left:

$$C \text{ or } C (+) \triangleright \text{ or } \vee = \bowtie \text{ or } \mathcal{C}$$

I maintain that the shape is based on *tulā* or *bhāra* as is known in the Indian weight system—a shape of weight, going as far as Mohenjodaro, in which case some scholars have wrongly taken it for *liṅga*. If a handle is attached to this symbol, it exactly gives the form of ten, as used in Brāhmī.

The remaining symbols from 5 to 100 are all derived from this symbol of ten but the principle of derivation is different from that seen in Kharoshthī. There the derivation is simple as the unit is twenty, which is actually double ten. In Brāhmī also the symbol for twenty is a full circle or ellipse, with handle inside depicted by a line or dot. This symbol of twenty is actually double ten as seen in Brāhmī:

$$\cap (+) \cup (+) - = \ominus$$

On the other hand the main unit, being ten in Brāhmī, other symbols are derived from it by the Indian method of additional strokes. Five has a symbol of ten with its mouth open upward and a vertical stroke added to it. The symbol of six is two ten symbols, placed one on the top of the other, both having their mouth open to the right. The symbol for seven has the symbol of ten with its mouth downward and a stroke extends the right arm downward. The

dead value of nothingness can be understood by the simple riddle of play balls:

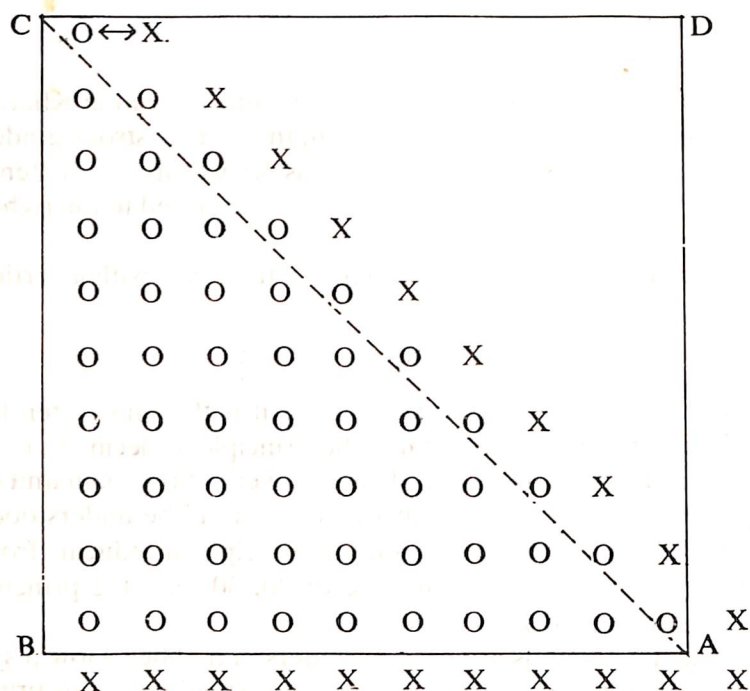


Fig.1

Note: O represents a ball. X represents nothing or zero. Split occurs at the tenth ball on top because of decimal system, where X is absorbed in the ball and an extra X is thrown outside, resulting in the place value of the ball in relation to X.

If the balls are counted vertically, they give the figures 10, 9, 8, 7, 6, 5, 4, 3, 2, 1 and what is left below is X, i.e. nothing or empty or *Śūnya*. If the balls are counted diagonally the uppermost row leaves only one ball and so many *nothings*. At the end there is again an extra *nothing*, which is similar to the dead value of the bottom row. But is it so dead? This was the main question. It remained a riddle for a long time.

However, it was later expressed in a single pole weight calculation. The relationship of the ball at the end of the pole (C) to the

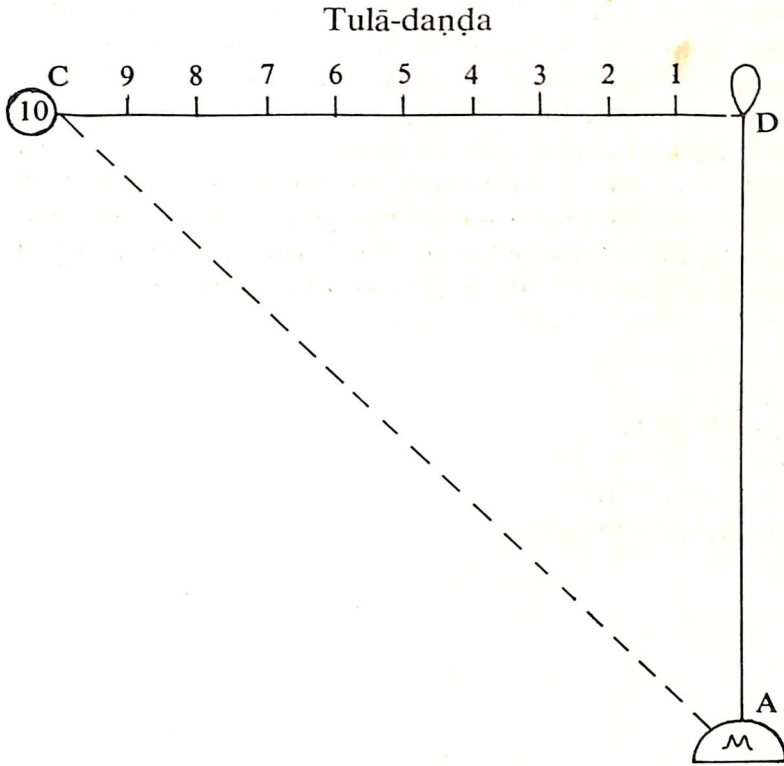


Fig. 2.

weight of the pan (A) was represented by the same diagonal equation of the triangle.

If the two weights are harmonious and balancing the string handle is at D, which is 0, which has now become a functional zero or potential zero, in place of dead zero. This realization, when conceived diagonally, can be expressed in the multiples of ten in a decimal system—a system derived from the earlier riddle of play balls. And that was what exactly done by the mathematical genius. It led to the place value of zero and the numbers on the left could go to infinity. Thus infinity was integrated into the potential living of zero. The infiniteness of universe became integrated into the life-giving force of zero. This mathematical realization was the greatest contribution that the Buddhist thought has made to the concept of eternal universal peace. Thus infinity, which is apparently not

understood, is concealed within the living principle of zero. This concept of zero was borrowed by the Arabs who passed it on to Europe. This greatest mathematical invention is the gift which mankind owes to India. While mathematics is now well understood, its living philosophy is forgotten. It is the integration of the infinite universe to the potential zero, towards which man is advancing. While we understand this process, let us pay homage to the unknown genius who invented this great principle and made our calculation so easy and at the same time opened the path for the future realization of the integration of the entire universe.

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4th April, 1985

A.H. DANI

INDIAN NUMERALS

No.	Kharoshthi	Basic forms in Brāhmī	Brāhmī examples from records	Modern Hindi forms
1	𑀓	—	—, 𑀓, 𑀔,	१
2	𑀕	=	=, 𑀕, 𑀖,	2
3	𑀗	≡	≡, 𑀗, 𑀘,	3
4	𑀙, x	+	+, 𑀙, 𑀚, 𑀛,	४
5	𑀜, 1x	𑀜 or 𑀝, h	𑀜, 𑀝, 𑀞, 𑀟, 𑀠	5
6	𑀡x	𑀡	𑀡, 𑀢, 𑀣, 𑀤,	६
7	𑀥x	𑀥	𑀥, 𑀦, 𑀧, 𑀨,	7
8	xx	𑀩	𑀩, 𑀪, 𑀫, 𑀬, 𑀭	8
9	1xx	𑀮	𑀮, 𑀯, 𑀰, 𑀱, 𑀲	9
10	𑀳	𑀳 or 𑀴	𑀳, 𑀴, 𑀵, 𑀶, 𑀷, 𑀸	१०
20	𑀹	𑀹	𑀹, 𑀺, 𑀻, 𑀼	20
30	𑀽𑀿	𑀽	𑀽, 𑀾, 𑀿, 𑁀	30
40	𑁁𑁃	𑁁	𑁁, 𑁂, 𑁃, 𑁄	40
50	𑁅𑁇𑁉	𑁅	𑁅, 𑁆, 𑁇, 𑁈, 𑁉	50
60	𑁊𑁌𑁎	𑁊	𑁊, 𑁋, 𑁌, 𑁍, 𑁎	60
70	𑁏𑁑𑁓𑁕	𑁏	𑁏, 𑁐, 𑁑, 𑁒, 𑁓, 𑁔	70
80	𑁖𑁘𑁚𑁜	𑁖	𑁖, 𑁗, 𑁘, 𑁙, 𑁚, 𑁛	80
90	𑁝𑁟𑁡𑁣	𑁝	𑁝, 𑁞, 𑁟, 𑁠, 𑁡, 𑁢	90
100	𑁤	𑁤 or 𑁥	𑁤, 𑁥, 𑁦, 𑁧, 𑁨, 𑁩	१००
200	𑁪, 𑁬	𑁪 or 𑁫	𑁪, 𑁫, 𑁬, 𑁭, 𑁮	200
1000	𑁯	𑁯	𑁯, 𑁰	१०००



PREFACE TO THE FIRST EDITION

THE following pages attempt to trace the evolution of the scripts originating from the Indian Brāhmī and Kharoshthī. As these styles of writing spread beyond the subcontinent of India and Pakistan, the scope of the book has been expanded so as to trace the development of these scripts in Central and South-east Asia. We have tried to link this development with the expansion of the civilization of the subcontinent into the neighbouring areas.

Palaeography is not confined to the study of the shapes of letters in the abstract. I have endeavoured to go beyond the mere shapes and search for the different traditions which govern a type following a set pattern on account of particular techniques. Writing is thus treated as an art resulting from a given culture. The different styles are only different traits in a cultural complex, and their analysis not only enables us to fix the type of writing that was prevalent at a particular period and in a particular place, but also provides a clue to the understanding of the culture within which the writing operated. It is only in the background of the cultural evolution that the writing styles can be properly followed and changes in them adequately explained. In the absence of this understanding the letters become mere shapes produced whimsically at random, but that is hardly true of any system of writing. The letter-forms are a part of culture, and palaeography defines them within that culture. In the following pages this concept is for the first time applied to the study of Indian palaeography.

In the past Indian palaeography has been studied mainly in order to provide a chronometer to date otherwise undated monuments or events of history on the basis of the shapes of letters which were reduced to chronological tables. But this method can never supply infallible dates. It is vain to treat the writing styles as an indicator of time any more accurate than any other particular trait in a given culture. The styles are to be understood in a particular context and are an effective means of dating within that context, but outside this sphere they are to be treated as falling within the compass of influence and counter-influence. On this hypothesis it is possible to establish a succession within a given culture and also to

relate the different cultures in time. But the link is only cultural. It is not possible to provide a mathematically precise table of dates. However, the following pages will show the value of these links, not only in understanding historical events, but also in tracing the origin of different local cultures.

The scope of the present book is limited to the eighth century A.D., when the writing had developed into proto-regional scripts. The later growth of the regional scripts is linked up with the evolution of the provincial languages, when particular scripts became identified with the latter. Their development requires a volume by itself. A chapter on the Indus Script and the later symbols has, however, been added here in order to familiarize readers with these systems. A glossary of terms is given at the end of the book, which will enable the readers to follow the definitions given in the text.

Finally, it is my pleasant duty to thank all those who have helped me in one way or the other in the writing of this book. I am much beholden to all my predecessors in the field whose works I have consulted with great profit, and it is on their foundation that I have built up the present edifice. I am indebted to the authorities of the School of Oriental and African Studies, University of London, who were good enough to offer me a research associateship, financed by the Rockefeller Foundation, which enabled me to work in London and complete this book. To Professor A. L. Basham I can hardly repay my debt. He not only suggested to me that I should undertake this work but encouraged me throughout by his friendly advice and criticism. He found time to read through the manuscript line by line with me and suggest many corrections, and finally agreed to write the foreword. I am obliged to him that he has allowed me to include his name on the dedication page. It is most tragic that, just when the text had been retyped, I heard the sad news of the death of my revered teacher, Professor A. S. Altekar, who was mainly responsible for creating in me an interest in Indological studies. It is from him that I first learned Indian palaeography, when I was a student in Banaras Hindu University. I am also obliged to Mr. A. H. Christie, who not only helped me in preparing the bibliography for South-east Asia, but also managed to obtain for me a further grant to prolong my stay in London and work on the palaeography of this region. Besides these, I had the benefit of consulting a number of persons at the School of Oriental and African Studies, who ungrudgingly spared time to solve my

difficulties. Among these I must mention my old teacher, Professor K. de B. Codrington, who went through my chapter on the Aśokan Brāhmī; Professor J. Brough, with whom I discussed the problem of the origin of the script; Professor C. J. Gadd, with whom I talked on the Indus Script; Dr. F. R. Allchin, who went through most of the chapters and favoured me with his criticism; Mr. Douglas Barrett, who read through my chapter on the Provincial Brāhmī; Dr. C. S. Upasak, whom I consulted on the Aśokan Brāhmī; and Dr. David Diringer, who was good enough to show me his collection on the alphabets. I am also obliged to the staff of the library at the School of Oriental and African Studies and the librarian, Royal Asiatic Society, London, for all the help that they kindly gave. In conclusion, I must record the name of Professor C. H. Philips, Director of the School of Oriental and African Studies, who not only obtained leave for me from the University of Dacca, but also took a keen interest in my work during my stay in London.

AHMAD HASAN DANI

Dacca Museum, East Pakistan
1 February 1960

Postscript

Since the above was written, Dr. C. S. Upasak's *History and Palaeography of Mauryan Brāhmī Script*, Nalanda, 1960, referred to on page 7 of the text, has been published. It is a valuable contribution to the study of Mauryan Brāhmī. Similar monographs on other periods will prove to be highly rewarding. In the meanwhile I have left the service of the University of Dacca and joined the University of Peshawar to work for archaeology and Indology under the inspiring guidance of Mr. Mohammad Ali, the Vice-Chancellor.

It is again my privilege to thank the Delegates of the Clarendon Press for accepting this work for publication and the printer for producing it so accurately and elegantly.

AHMAD HASAN DANI

University of Peshawar
1 January 1963



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ABBREVIATIONS

<i>An. Rep. A.S.I.</i>	<i>Annual Report of the Archaeological Survey of India.</i>
<i>A.S.R.</i>	<i>Archaeological Survey of India, report by A. Cunningham.</i>
<i>A.S.W.I.</i>	<i>Archaeological Survey of Western India, report by J. Burgess.</i>
<i>C.I.I.</i>	<i>Corpus Inscriptionum Indicarum.</i>
<i>Ep. Ind.</i>	<i>Epigraphia Indica.</i>
<i>Ep. Zeylanica</i>	<i>Epigraphia Zeylanica.</i>
<i>Ind. Ant.</i>	<i>Indian Antiquary.</i>
<i>I.H.Q.</i>	<i>Indian Historical Quarterly.</i>
<i>J.A.S.B.</i>	<i>Journal of the Asiatic Society of Bengal.</i>
<i>J.B.O.R.S.</i>	<i>Journal of the Bihar and Orissa Research Society.</i>
<i>J.B.R.S.</i>	<i>Journal of the Bihar Research Society.</i>
<i>J.N.S.I.</i>	<i>Journal of the Numismatic Society of India.</i>
<i>J.R.A.S.</i>	<i>Journal of the Royal Asiatic Society.</i>
<i>M. (or Mem.) A.S.I.</i>	<i>Memoirs of the Archaeological Survey of India.</i>
<i>M.P.I.</i>	<i>Minor Pillar Inscription.</i>
<i>M.R.I.</i>	<i>Minor Rock Inscription.</i>
<i>P.E.</i>	<i>Pillar Edict.</i>
<i>R.E.</i>	<i>Rock Edict.</i>
<i>S.E.</i>	<i>Separate Edict.</i>

INTRODUCTION

THE history of the study of Indian palaeography falls into three definite stages. The first, which covers the late eighteenth and early nineteenth centuries, was the period of the discovery of the inscriptions and the decipherment of the scripts used in them.¹ Individual efforts made earlier in this field were co-ordinated with the foundation of the Asiatic Society in Calcutta in 1784. The first successful effort at interpretation was made in 1785 by Charles Wilkins, who read the Badal pillar inscription (Dinajpur district, East Pakistan) of the Pāla king Nārāyaṇapāla. In the same year Pandit Radhakant Sharma read the Delhi-Topra pillar inscription of the Chāhamāna king Visaladeva. Later, the discovery of the Maukhari inscriptions from the Barabar Hill caves in Bihar enabled Wilkins to tackle the inscriptions of the Gupta rulers. Still further afield, James Tod collected a large number of inscriptions in Rajasthan, Central India, and Gujarat between 1818 and 1823. These inscriptions, which ranged from the seventh to the fifteenth centuries A.D., were partially read with the help of Yato Jñānachandra. These early efforts received a further impetus when in 1834 Babington prepared a table of letters on the basis of the Sanskrit and Tamil inscriptions discovered at Mamallapuram;² in 1833 Walter Elliot published an elaborate comparative table of the older forms of the Kannada alphabet; and in 1837 Captain H. Harkness compiled his *Ancient and Modern Alphabets of the Popular Hindu Languages of the Southern Peninsula of India*. During these years the inscriptions of the Guptas of Northern India and those of the Maitrakas of Valabhi were completely deciphered. In this new venture we may notice the remarkable personality of James Prinsep, who was to bring about a revolutionary change in the decipherment of the still older inscriptions.

¹ This statement relates only to Brāhmī and Kharoshthī inscriptions. The problem of the Indus Script is discussed in Chapter 2.

² *J.A.S.B.*, 1837, pp. 219-20, pl. XIII.

These were the writings seen on the bilingual coins discovered in the north-western regions of India (now in West Pakistan), and in many rock and pillar inscriptions, which later proved to be of the great Mauryan king Aśoka. The story of the decipherment is told by Prinsep himself in his *Indian Antiquities*. Up till then these early writings had been supposed to have been based on principles different from those of later Indian scripts. But their decipherment by Prinsep dealt a death-blow to this concept. He was the first man to realize the significance of his success, and accordingly he prepared a chart with the title 'Modifications of the Sanskrit Alphabet from 543 B.C. to A.D. 1200', and added a note:

Having thus recovered the complete, and as I consider it, the primeval alphabet of the Indian languages, I have arranged in the accompanying plate the changes each letter has undergone in successive centuries, as deduced from absolute records on copper or stone. The table furnishes a curious species of palaeographic chronometer, by which an ancient monument may be assigned with considerable accuracy to the period at which it was written, even though it possesses no actual date.¹

With James Prinsep the first stage of Indian palaeography closes and its second stage begins.

From the efforts of these early scholars we have inherited a knowledge of two main writing systems in India. The first was written from left to right, as are all the modern Indian scripts, except Arabic which was later introduced by the Muslims; and the second was written from right to left and was confined mainly to the north-western regions of India for a limited period, roughly from the third century B.C. to the third to fourth century A.D., though in Central Asia it continued to be used till about the eighth century A.D. The term 'Brāhmī' has been applied to the first script, as all creation, according to the Indian conception, is from Brahmā, and the second script has been called 'Kharoshthī' mainly on the evidence of the Chinese sources, but the meaning of this last term is by no means definite. Whether it is connected with *khara-oshtha* (ass-lip), *khara-post* (Persian, meaning hide of the ass), *khara-ustar* (Persian, meaning ass and camel, implying a caravan of merchants), or the possible Aramaic word *harūtthā* (engraving or writing), is difficult to say. It is certain, however, that the name was

¹ James Prinsep, *Essays on Indian Antiquities*, ed. by E. Thomas, London, 1858, p. 39.

associated with the script from a very early time. Not satisfied with the real meanings of these terms, already in the first stage scholars began to speculate on the origin of these scripts. Kharoshthī was easily connected with the Semitic group because of the direction of writing, but Brāhmī raised an insoluble problem. The early writers, including James Prinsep, were inclined to derive it from the Greek, as this was written from left to right and offered the easiest comparable material.¹ On the basis of the method of the comparison of signs then available, a second theory of the origin of Brāhmī was also mooted, even before the nineteenth century. It was Sir William Jones who first suggested its connexion with Semitic writing.

As has been said before, Prinsep laid the foundation of the second stage. Indian palaeography became a recognized study, and James Burgess defined it as 'the study of the gradual modification of alphabets in the course of time'.² To A. C. Burnell goes the credit of producing in 1874 the first book on the subject, *Elements of South Indian Palaeography (from the 4th to the 14th century A.D.), being an introduction to the study of South Indian inscriptions and manuscripts*. About this time a Dutch scholar, K. F. Holle, was working in South-east Asia, collecting his materials on the different scripts of that part of the world, and he published in 1877 his *Tabel van Oud- en Nieuw-Indische Alfabetten*. A similar work was undertaken by Burgess in 1883:

relating to Peninsular India from the Kṛishṇā river to the Vindhya hills, that is, for the Dekhan, Koṅkaṇ and Gujarat . . . representing the characters used in the numerous inscriptions, especially those in the cave temples from the age of Aśoka, 250 B.C., till the end of the eighth century, when the old type of alphabet, founded on the Pāli or Mauryan, was disappearing, the Devanāgarī taking its place over the northern portions of this area, and the Canarese in the south.³

The study of these scripts was greatly facilitated by the publication of copies of the inscriptions in various specialized journals. In 1877 Cunningham published the *Inscriptions of Aśoka*, and in 1888 J. F. Fleet produced his *Inscriptions of the Guptas and their Contemporaries*. All these materials were utilized, and for the first time in 1894 a comprehensive book on Indian palaeography, called *Prāchīna Lipimālā*, was brought out in Hindi by

¹ Prinsep, op. cit. ii. 42.

² A.S.W.I. iv. 72.

³ Ibid., p. 74.

Gaurishankar Hirachand Ojha. Three German scholars also made a special contribution to the study of Indian palaeography in the latter half of the nineteenth century. Rudolf Hoernle thoroughly analysed the Bower MS., and along with Fleet paved the way for the study of the regional scripts in North India. Ernst Hultzsch, by his edition of the *South Indian Inscriptions*, served the cause of the South Indian palaeography in the same manner. But it was left to Johan Georg Bühler to utilize all the materials then known and produce in 1896 the standard work on the subject, *Indische Palaeographie*. Just as Prinsep in the first stage, so Bühler, at the end of the second, summed up the views of the scholars of his time and laid the foundations for the third stage in his monumental work, which has remained to this day the standard book on Indian palaeography.

The main purpose of the scholars in the second stage was to produce as accurately as possible charts of the various writings from the original records, so as to collect at one place all the scripts for the guidance of those who wished to read and interpret them.¹ Hence there was the necessity of acquiring faithful reproductions of the originals. The lack of mechanical processes greatly hindered the work of the early scholars. As late as 1883 Burgess² complains:

‘As applied to Indian inscriptions, comparative palaeography has as yet made but little progress towards scientific accuracy, and much has still to be done before we can use the characters of different inscriptions with full confidence as a safe guide to chronology.’

Bühler’s work represents the climax of the work carried out by such means, as he says in his concluding remarks:

‘I have been able to illustrate most of the Indian alphabets by cuttings from facsimiles, instead of hand-drawn signs.’³

Extreme care in copying the original forms was dictated by another motive, which was already foreseen by Prinsep, the motive of dating the ancient record or the monument on which it occurs with the help of palaeography. This was particularly important for Indologists who, in the absence of other means for reconstructing the chronology of ancient India, discovered in palaeography a handy time-scale for that purpose. A change in the letter-forms

¹ Ojha, *Bhāratiya Prāchīna Lipimālā*, 2nd ed., introduction, p. 6.

² *A.S.W.I.* iv. 72.

³ *Indian Palaeography*, Eng. tr., p. 102.

was for them chiefly important as marking a difference in time. Hence they needed accurate copies of inscriptions belonging to rulers whose chronology was more or less ascertained by other synchronisms, and would then compare the style of writing of these inscriptions in order to date the records of less-known or unknown rulers. It was on this basis that the terminology of the period was evolved. Accordingly, we hear of the scripts of the Mauryas, the Kushāṇas, the Guptas, the Chālukyas, &c. Fleet found this system inaccurate, and he was the first person to propound geographical designations for the scripts. He wrote in his *Corpus of the Gupta Inscriptions* of the 'Northern' and 'Southern' characters—terms which have persisted till today—and along with Rudolf Hoernle divided the northern characters into 'Eastern' and 'Western' varieties. Their main purpose again was to define more accurately the terminology already accepted, so that the differing scripts known from the inscriptions of the same ruler might be better explained. This was a great step forward from the rudimentary conception held in the first stage, when scholars talked only of the different scripts as ends in themselves. Ojha in his work did not realize the significance of this new conception—as he himself writes: 'The regional differences and time may also produce changes in the letter forms, and accordingly the scripts may be subdivided, but we do not consider this necessary.'¹ Hence in his book he talks only of the Brāhmī, the Gupta, the *kuṭila*, the Nāgarī, and other scripts. This conception still persists, and as late as 1951 Dr. T. Vimalananda, in his thesis (University of London), *Epigraphy and Palaeography of Ceylon down to 10th century A.D.*, talks of the 'dead' Brāhmī *lipi* as if it had no relation with the later scripts. Bühler ranked with Fleet and Hoernle, and in his work advanced a further stage in the interpretation of Indian palaeography. He accepted the evolutionary character of Indian scripts and further analysed their regional and chronological variations. But his main contribution lay in realizing the influence of the pen and the stylus, though unfortunately he could not work out in detail the way in which this technical difference resulted in the creation of new forms. He was, after all, a scholar of the nineteenth century, when little attention had been paid to the technological problems involved in writing. For scholars of that period the outward forms were ends in themselves, and their

¹ Ojha, op. cit., p. 60.

analysis and classification was the best that they could hope for. This was the reason why great stress was laid on the accurate copying of each and every letter occurring in different inscriptions. However, Bühler and Hoernle both realized the mistake of this method when applied to manuscripts, and they gave another time-scale for dating them.

For all these palaeographers, the occurrence of one or the other form connoted relationship in time, and they hardly concerned themselves with discovering any principle underlying the development of the characters. On this question their conception was very vague. Thus, on the 'northern alphabets', Bühler writes:

Their origin is to be found in the cursive forms, which first appear in the addition to the Aśoka edict VI of Dhauli, and in a number of signs of the Kālsī version, and later are found, occasionally or constantly, in some of the Jaina votive inscriptions of the Kuṣāṇa period. Their general type is that of a cursive alphabet with signs reduced at the top to the same height, and made throughout, as much as possible, equal in breadth. As the occurrence of ancient MSS. and various peculiarities of the letters, such as the formation of wedges out of the *serifs* at the ends of the verticals, clearly prove, they were always written with a pen or a brush and ink.¹

In this quotation there are four concepts; the idea of cursive forms, the equalization of the height, the formation of the wedges, and the notion of 'serifs' at the ends of the verticals. What part these different concepts played in the creation of the forms is not explained at all. We generally hear of the cursive forms resulting from the motive of quick writing. Surely this motive of saving time alone did not result in producing the great number of writing styles in India? The writings seen in the records of the Ikshvākus, the later Pallavas, the Chālukyas, and Harshavardhana can hardly be said to be cursive forms, but rather they are florid in the highest degree. The word 'cursive' has been used loosely by the palaeographers. We must distinguish between cursive writing, which is natural in a handwritten document, and the forms of the letters, which are the result of various technical processes used in a particular tradition. The forms must conform to this tradition and all changes in them must be accepted in that tradition. The wedges or the serifs are not something new, imposed from outside, but result in the very process of creating the accepted forms. The

¹ *Indian Palaeography*, Eng. tr., p. 45.

change is due to the tool, and not to the motive of cursive writing. Once a form is created, its later development follows the rules of general art.

As this conception is not to be found in the palaeographic writings of that time, the terms used in them remained undefined. One can, however, usually infer the sense in which they were used. Such terms as 'wedges', 'serifs', or 'block-heads', generally implied only outward shapes, with no intimate relation to the actual forms of the letters. It was this wrong conception which misled Bühler into seeing the existence of the serif in some letters of the Aśokan edicts.¹ On the other hand, Ojha seems to have attached no importance at all to the occurrence of these block-heads, wedges, serifs, &c. It appears that the terms were borrowed from outside, and without any due consideration were applied to Indian palaeography. One such new term used by Dr. Vimalananda in his thesis is 'uncial', borrowed directly from Greek palaeography and made the basis of classification over and above the cursive forms in his introduction, but he himself hardly applied it in his main description of the characters.

From these palaeographers we have inherited large numbers of charts illustrating different characters, elaborate descriptions of the different forms of letters, and information about the time when such forms first appear in writing. It is from the accurate recording of this that the date of an epigraph is determined. Bühler went a step further in tracing the origin and development of the regional scripts. He divided even Aśokan Brāhmī into northern and southern groups and talked of a separate 'Drāviḍi' script, especially in connexion with the Bhattiprolu inscriptions. This classification has been accepted until now, and Dr. Vimalananda in his thesis took it for granted. But C. S. Upasak, in his detailed study of Mauryan Brāhmī, has for the first time challenged the validity of such a classification. His method rests again on the formal comparison of the signs, but by his detailed analysis he has found that no particular forms are exclusive to the northern or the southern areas.

For the later regional scripts Ojha adopted the modern names, while Bühler worked out his own system based on the minute classification of the forms. Alberuni's description² of the several

¹ *Indian Palaeography*, Eng. tr., p. 34.

² See below, p. 112.

Indian writings in the tenth century A.D. was also analysed, but Bühler found it hard to reconcile the various systems given by Alberuni with his own classification. He also quotes from *Lalitavistara*, which enumerates sixty-four scripts, and from two Jaina works, *Samavāyāṅga Sūtra* and *Pañṇāvaṇā Sūtra*, and rightly says that the fantastic description given by them is hardly consistent with the available evidence.

The most important contribution of this period was the discussion of the origin of the Brāhmī and the Kharoshthī scripts. This question was treated by the same method of the formal comparison of signs as was used in the description of the Indian scripts themselves. Bühler, in his work *On the Origin of the Indian Brāhma Alphabet*, sums up the views of the earlier scholars on both these scripts. While his conclusion on Kharoshthī has been usually accepted, the problem of Brāhmī still remains controversial. Bühler sought to meet opposing arguments by propounding the theory that Brāhmī also was originally written from right to left, relying mainly on the doubtful evidence of a faulty coin from Eran.¹ This contention has been further supported by D. C. Sircar,² on the evidence of the Duwe Gala cave inscription from Ceylon, and David Diringer³ says that the Yerragudi minor rock edict 'leaves no doubt that the *boustrophedon* style was known in the time of Aśoka'. All these examples are quoted to establish a closer link on the formal basis between Brāhmī and one of the Semitic group of alphabets. But D. C. Sircar concludes: 'This fact [i.e. writing from right to left] again connects the Brāhmī alphabet with the prehistoric writing of the Indus Valley from which it was undoubtedly derived.' It was Cunningham who first suggested that Brāhmī was to be derived from some pictographic writing in India. Since the discovery of the Indus Valley Script this suggestion has been supported by several scholars. Hunter claims to have worked out the vowel notation in the Indus Valley and connects it with that of Brāhmī. But the gap between the destruction of the Indus Valley civilization and the first appearance of the Brāhmī inscriptions has led many scholars to view this suggestion with doubt. However, Ojha alone has analysed the literary sources and tried to establish the existence of the concepts of vowels and consonants

¹ See below, p. 61.

² *Select Inscriptions*, Calcutta, 1942, p. 233, n. 1.

³ *The Alphabet*, London, 1947, p. 339.

and even the whole Indian phonological system much earlier than their first appearance in the written records now available to us. He maintains that this system was the invention of the Aryans in India and that Brāhmī, as the very name suggests, is the outward expression of this system. This view of Ojha has been recently summarized by Raj Bali Pandey,¹ who explains the absence of specimens of writing before the fifth century B.C. in India by maintaining that 'early Brahmanical literature and books were written on leaves, birch-bark and later on hand-made paper. Such frail and perishable materials could not be preserved for a long time'.² This statement is contradicted by the well-known evidence that the sacred literature of the Aryans was not committed to writing but passed on by word of mouth from generation to generation.

The third stage in the study of Indian palaeography begins from the close of the nineteenth century, when the Government of India started to issue regular volumes of *Epigraphia Indica*. In these journals every inscription edited has some introductory paragraphs dealing with its palaeography. A vast amount of comparative material is thus available for different periods of writing. Similar materials are also available in the epigraphic publications of Ceylon and the countries of South-east Asia. But through all these publications Bühler's method has remained the standard. I have not been able to detect any new angle of study in any of these writings. On the same principle individual efforts have been made to trace the evolution of the regional scripts and bring them down to modern times. An elaborate application of this principle is seen in C. Sivaramamurti's *Indian Epigraphy and South Indian Scripts*, in which he has tried to put on different pages the changing forms of every letter and thus reduce them into abstract shapes apart from the context in which they appear. The method is no doubt suitable for showing the development of the forms in a museum gallery, and the book is at best a faithful record of that method. Another recent contribution is Raj Bali Pandey's *Indian Palaeography*, which, except for the general chapters on the antiquity and origin of Indian writing and the history of its decipherment, contains nothing on what is understood by the term 'palaeography'. F. W. Thomas contributed an important article, 'Brāhmī Script in Central-Asian Sanskrit Manuscripts', in which

¹ *Indian Palaeography*, pt. I, Banaras, 1952, chapter I.

² *Ibid.*, p. 15.

he discussed the terminology earlier framed by Hoernle on the basis of formal shapes, and tried to evolve a regional and chronological system from the numerous manuscript materials now available. A comprehensive book on *The Development of the Kharoṣṭhī Script* by C. C. Dasgupta was published in 1958, in which the author claims to have made a detailed analysis of the forms known in the inscriptions and the manuscripts. Except for this compilation there is hardly anything original in the book, and even the compilation suffers from the defect of the simplified copying of the original forms. Palaeographical questions, when raised, have often been answered by quotation from other authors, the special problems relating to the Kharoshṭhī script are hardly touched.

My particular approach to the study of Indian palaeography follows from my conception of writing as being a part of culture, and as I would seek to discover a culture through the various traits seen in the available material contents, so it is also possible to search for the different writing styles which can be inferred from the available specimens. The forms in any particular inscription are not ends in themselves. They are the materials for proper study and analysis into one or other tradition following one or other technique. The tradition relates the script to one particular culture, and thus writing becomes a part of the culture, and the difference in technique accounts for the creation of the new forms. As a palaeographer I am in quest of the traditions and the techniques that can better explain the development of the characters in India, and thus pave the way to defining the particular cultures within which the different writing styles operate. The development of their writings is a part of the evolution of those cultures. Hence I do not attach importance to the formal comparison of the signs, though in the absence of any other clue this may be made the basis of preliminary study. However, my method demands that for purposes of comparison one should take into account the total number of signs in any inscription and compare them *in that context* with similar assessments of other inscriptions. It is necessary to go beyond the outward forms and look for the inner unity of the letters on the basis of technical analysis and phonological content. The phonology will relate the script to the alphabet and the technique will dictate the nature of forms that must result from it. The study of palaeography is thus an attempt to discover

the various styles of writing in any particular culture as it evolved through the centuries. When we go beyond this and act as arbiter to assign one or the other date to an epigraph, we are no longer true to the subject with which we are dealing. But it is precisely with this last objective that palaeography in India has hitherto been studied. From the time that Prinsep realized the great part that Indian palaeography could play in supplying chronological clues to otherwise undatable objects, it has been the aim of the palaeographers to perfect their method and make it as exact a subject as any other science, so as to give infallible dates. But the following pages will show that this is too much to expect from palaeography. Though I have myself not been free from the motive of assigning dates to epigraphs, I fully realize the limitation of the subject, and hence have here tried to discover the various writing styles and through them the cultures to which they rightly belong. My dating of the inscriptions is relative to the styles, and the links that I have tried to establish between them are based on the same principles as those which govern any other trait of a culture. As will be clear from the description of this method,¹ the illustrations given are not exact copies of the originals, but they are the forms of the various styles as I have reconstructed them after examining the different inscriptions. My approach to the question of the origin of the scripts follows from this concept.

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¹ See below, pp. 34 and 148.


THE INDUS SCRIPT

Definition

THE earliest script of the Indo-Pakistan subcontinent, known from discoveries of seals first at Harappa in the Montgomery district of Punjab (Pakistan), and later at Mohenjodaro in the Lakarna district of Sind, is termed here the 'Indus Script', as it was mainly in use, if it did not actually originate, in the Indus Valley zone. These discoveries received greater importance and attention after 1922, when the excavations conducted at these two sites under the direction of Sir John Marshall brought to light a new civilization, ranking in content and time with the civilizations of the Ancient Orient. The Indus Valley found a place in the Ancient World of Bronze Age cultures, in a period when the art of writing had already developed.

Origin

We still do not know where the art of writing was first invented, and with this question is related the origin of the Indus Script. There is nothing more to add to what Dr. G. R. Hunter wrote in 1934:

A cursory examination of the script of Mohenjodaro and Harappa will reveal that it is distinctive. It is neither Sumerian, nor any other known script, though it bears certain resemblances to several. Some of these are doubtless coincidental, since in the very nature of pictographic writing it is hardly possible to avoid some similarity in depicting the same object. A closer examination will establish that it is precisely the commoner signs of our texts that are the most distinctive—e.g. . At the same time it would be rash, in the present state of our knowledge on the subject, to rule out of court the hypothesis of a common descent from some remote ancestor for the script of Harappa and any other pictographic script. We know so little, after all, of the ultimate pictographic ancestry of any script, even Sumerian.

Attempted decipherments

But while the Sumerian and the hieroglyphic writings have been successfully read, and the meanings of the inscriptions written in these characters have opened to us the minds of the builders of those civilizations, the Indus Script remains undeciphered. Only the material remains have acquainted us with the day-to-day life of the people who formed this civilization. Their language also remains a secret. The material remains have been interpreted in the light of the contemporary world or, more commonly, against the background of the succeeding historical cultures in the sub-continent, and various conclusions about the people and their language have been drawn. These are, of course, hypothetical. It is on these hypotheses that attempts at deciphering the script have been made. The first in the field was L. A. Waddell, who believed in the identity of the Sumerians and the Aryans, tried to read the inscriptions in Sumerian on the basis of a few apparent links, and found in them names of Vedic and Epic heroes. Dr. Pran Nath followed the same line, but supposed the language to be some form of old Sanskrit or Prakrit and utilized the Brāhmī script of a much later date to ascertain what he believed to be the correct sound value of the symbols. Another suggestion of Pran Nath's, that the significance of the symbols might be arrived at on the basis of Tantric signs, was independently developed by Śankarananda and also by Dr. B. M. Barua, both assuming that the writing is alphabetic. Professor B. Hrozny took the people to be proto-Hittites, an earlier branch of the Indo-Europeans, and tried to interpret the inscriptions with the help of the Hittite language. As opposed to these suggestions, Father H. Heras assumed that the people were Dravidians and tried to reconstruct a proto-Dravidian language for them, and for his interpretation compared the Indus signs with Sumerian, hieroglyphic, and proto-Chinese symbols. Finding no clue to the people and their language, Sir Flinders Petrie tried to interpret the Indus symbols as ideographs, on the analogy of those of Egypt and on the further assumption that the Indus seals contain only titles of the officials. Later, Meriggi realized Petrie's mistake in taking all the symbols as ideographs. He believed the Indus Script to be an ideo-phonographic system of writing and assumed some symbols to be ideograms and others phonemes. For determining their meanings he often referred to the

Hittite vocabulary and to Hittite hieroglyphs. G. de Hévesy rejected all these suppositions and drew attention to the similarities between the Indus Valley Script and the script of Easter Island, maintaining that the latter was the progenitor of the former. But apart from a certain apparent similarity there is nothing to authenticate the antiquity of the script of Easter Island.

There is very little external evidence to prove or disprove the readings suggested by the different scholars mentioned above. The only effective argument against each of them is the fact that the criticism levied by one against the other is equally applicable to the critic's own method. These difficulties were fully realized by Gadd, Sydney Smith, Langdon, and Hunter, and they all chose to confine themselves to listing the signs, mechanically counting their use in the different inscriptions, and suggesting their possible significance. Beyond this mechanical process Gadd has ventured to discover in them 'an ancient Indo-Aryan language' and actually suggested the reading *putra* (son) for $\uparrow \text{ III } \text{ U}$. Langdon and, following him, Hunter have tried to see some connexion between the Aśokan Brāhmī and the Indus Script, and the latter especially has ventured to suggest vowel signs on this very basis. Both of them argue for a syllabic system of writing. Sydney Smith alone has refrained from falling into any such temptation. He has commented on the mechanical nature of the writing, and has attempted to discover the determinatives, end-signs, and beginning-signs. Beyond this stage it is hardly possible to go with the materials at present available. Professor J. Friedrich rightly points out the main difficulty:

The decipherment of an unknown language in a known script, such as the cuneiform Hittite, Etruscan, or Urartean; or of a known language in an unknown script, such as the Greek in the Cyprian syllabic script, is much more hopeful than that of an unknown script and unknown language, as the case is with the hieroglyphic Hittite or Cretan languages. For such works certain points of contact are necessary. Nothing can be made out of nothing.

Another great difficulty is the total absence of long inscriptions. We have so far found only short epigraphs on seals, or metal tablets, or rare impressions on pottery.

A new approach

As the purpose of this book is to study the script in particular,

and not the inscriptions as such, the method adopted here is different from that followed in the works of Marshall and Hunter. But they remain the basic groundwork for all those who wish to decipher the Indus Script. Here we shall simply attempt a morphological study of the script in order to familiarize ourselves with the nature of the writing followed by the Indus people.

Method followed here

In the plates (I and II) illustrating the script an attempt is made to arrive as far as possible at the correct form by comparing the symbols in various publications and copying the most common type. No tracing of the symbol from any particular seal is therefore to be expected. The sign-lists given by Hunter and in Marshall's volumes (pp. 434-52 and pls. CXIX-CXXIX) have been compared with the original photographs of the seals and readjustment made. Some further symbols from Mackay's *Further Excavations at Mohenjodaro* have been added.

A new principle of classification has been adopted here. Pl. Ia, group A, illustrates stylized living beings; group B of this plate and Pl. Ib show objects which can be easily recognized. In Pl. II a, b are shown those symbols which take geometrical forms, such as ovals, triangles, quadrangles, angles, crosses, &c. A few of these can also be construed as highly stylized forms, e.g. the oval (Pl. IIa. I. 1)¹ does not appear to be different from the objects hanging from either end of the pole carried by the man in Pl. Ia. IV. 2-11. Again in Pl. IIa the two complicated symbols in columns 14 and 15 are obviously magical emblems—one of crosses and the other of the mysterious so-called taurines and a square. Pl. IIb shows in the last five lines strokes—horizontal, vertical, or slanting—often in combination as they have been actually found. In Pl. IIb. XII. 10-15 are given the symbols, termed brackets, as they are found bracketing other symbols in the seals (see reading no. 2). In Pl. IIa seven readings have been given.

The symbols are copies from the photographs of the seal impressions as they have been usually published. Probably this is the correct way of looking at them, rather than as on the seals themselves.

¹ The first number represents plate, the second the line or row in which the particular symbol appears, and the third the column in which it lies.

Direction of writing

On the analogy of the Egyptian hieroglyphs, as well as from the fact that the animals mostly face right, it has been suggested that the direction of writing is from right to left, i.e. it begins from the side of the animal's head and goes to its tail. Another argument adduced is from the symbol, Pl. IIb XII. 3, which has four strokes in the first row and three in the second beginning from the right. But the symbol, Pl. IIb. XII. 2, suggests just the reverse. Further evidence is taken from the seal given in reading no. 7, where it is suggested that the writing begins from the right but owing to shortage of space some symbols are put on the left below the line. On the other hand, Marshall argues that the writing which begins from the right is actually *boustrophedon*. He cites the evidence of the seals, readings nos. 2 and 3, and points out that the second line possibly begins from the left; reading no. 6, as he says, shows the reverse of the last three symbols in no. 5. But a careful examination of the readings 2 and 3 in the original seals shows that the presence of the animal's head with horn resulted in the second line being placed on the left half. The proof can be seen in reading no. 4, where the second line is in the middle. Therefore the arguments produced are not sufficient to confirm either suggestion. However, if pictographs are predominant in this writing, and if it has any resemblance to the Sumerian pictographic and Egyptian hieroglyphic scripts, the writing may be *boustrophedon*.

Nature of the script

In all, 537 symbols have been listed here. Out of these the living beings, which are of 8 categories, include 99 symbols; the stylized objects, which are 19 in all, have 132 symbols; and the remainder, 306, are grouped under other categories. There can be no finality in the correctness of the number as long as the script remains undeciphered. Probably symbols as in Pl. Ia. II. 6, 7, or in Pl. Ia. VII. 5, 6, may represent the same sense. Such possible corrections must be borne in mind.

Quite obviously a system with such a large number of symbols must be very different from any known alphabetic scripts. On the other hand, the compound symbols, such as Pl. Ia. III. 1 (= Pls. Ia. I. 1 and IIb. IX. 5), Pl. Ia. X. 6 (= Pls. Ia. X. 1 and Ib. VII. 10),

Pl. IIa. iv. 4 (= Pls. IIa. iii. 7, Pl. Ib. iv. 3), suggest the same principle as underlies the conjuncts in the later Indian scripts; e.g. $\text{रह} = \text{र} + \text{ह}$; $\text{चय} = \text{च} + \text{य}$; $\text{कख} = \text{क} + \text{ख}$. Probably this feature led Langdon to propose the syllabic nature of the script, and Hunter further argued that this very nature is preserved right down in modern Indian scripts, which are not truly alphabetic except in the case of the initial vowels (e.g. क् is actually $\text{क्} + \text{अ}$). This can hardly be dogmatically asserted when the recognizable objects easily suggest pictographic or ideographic meanings. On the other hand, the way in which strokes—horizontal, vertical, or slanting—are added to the original object symbols (e.g. fish sign or jar sign) militates against taking them to be simple pictographs or ideographs. The addition of strokes to the original sign is one of the chief characteristics of the Indus Script. They cannot all be taken to be *guna* additions. If they have any other meaning, they suggest different values. But such additional strokes are not to be found at all in homo-signs and some others. Obviously in these cases the pictographic character is preserved. Hence it seems that the nature of the Indus Script is picto-phonographic or ideo-phonographic—included by David Diringer among ‘transitional scripts’.

Special features

The homo-signs depict a man as a simple vertical line with slanting strokes, two for arms and two for legs. He is single as in Pl. Ia. i. 1, 2, or double as in Pl. Ia. i. 3, but more often in action, suggested by the addition of recognizable objects. Symbols, Pl. Ia. i. 7, 8, have two additional upward strokes, one on either side of the head. They are usually taken as horns, as these play an important role in the Indus civilization, but Father Heras takes them to be hands and suggests a four-handed deity, on the analogy of the later Indian iconography, probably because the strokes start from the shoulder and not from the head. Whatever they are—horns, additional hands, or a simple aureole—they indicate a superman or divine being, and hence the symbol in Pl. Ia. i. 10 with only a single additional stroke on the left may be a semi-divine being. Symbols, Pl. Ia. iv. 8–12, probably show two men carrying a load, although two heads with a single body are depicted. The sub-classes show objects carried in the hand, at the waist, over the head, at the leg or feet, and on the shoulders.

In the bird-signs one can see a creature in flight (probably a bat), Pl. Ia. vi. 14; a bird in a cage or enclosure of some kind, Pl. Ia. vi. 12; and a bird with a cross in the belly, Pl. Ia. vi. 13. One can also possibly recognize a hen, Pl. Ia. vi. 10; a crow, Pl. Ia. vi. 9; and a peacock, Pl. Ia. vi. 6; but probably these different species are immaterial. What is more important is the addition of strokes, 1-3 in the belly and at the tail.

The strokes are clearer still in the fish-signs: (i) one or three downward slanting strokes on either side of the fish; (ii) one vertical or horizontal stroke, or three slanting strokes, in the belly; (iii) two upward slanting strokes as in the case of the divine man; and (iv) an arch-like sign above.

In the case of the scorpion one or two horns are discernible, and these can be compared with Pl. Ib. i. 11-14. The quadruped-sign, Pl. Ia. viii. 11-12, is taken by Hunter to be a development from the one in Pl. IIb. vii. 8. But here again the internal and external strokes are well marked.

In the jar and container signs the strokes range from 1 to 3, but in the latter a fourth stroke and also a fifth stroke (Pl. Ia. x. 12) can sometimes be seen. The container is also found in combination with others, like wheel, cross, &c. The horn (Pl. Ib. i. 15) has significant dots at the mouth, suggesting the historical cornucopiae. Some of the *pipal* leaves (Pl. Ib. ii. 4-5) are also horned. Father Heras's suggestion that they are double leaves is hardly tenable.

The wheel has four, six, or eight spokes, and sometimes shows what appears to be the axle hole (Pl. Ib. iv. 1). It is also found in combination, the most significant example of which is the wheeled vehicle (Pl. Ib. iv. 6). The bow has its arrow pointed upward, and it is often found in combination with a man. Another compound containing this symbol is Pl. IIb. vii. 6. To the water-sign is significantly attached a horn (Pl. Ib. iv. 15). The shrimping net, besides having strokes from 1 to 4, is found in combination with a man (Pl. Ia. iii. 11). The hill-sign has significantly two or three peaks, or two or three internal strokes. The plant has 1-5 strokes, besides the arch-like sign; in Pl. Ib. viii. 6, 7 there are ten strokes and in 8 we have eighteen.

The same system of compounds and stroke addition is followed in the case of ovals and their parts; but in quadrangles, triangles, angles, and crosses, the addition of strokes from 1 to 6 is most

common. The only compounds noticed are with the cross, taurine, wheel, or sun within rhombus (Pl. IIb. II. 8-9, 15), or double tree attached to rhombus (Pl. IIb. III. 6), or as in Pl. IIb. III. 2 and VII. 6-7. The arch-like sign is flattened in Pl. IIa. VI. 9-12 and VIII. 1. The four-armed cross has ovals or crosses at the ends (Pl. IIa. VIII. 2, 15). It sometimes develops into a six-armed symbol, Pl. IIa. VIII. 3.

A fuller idea about the strokes can be obtained from Pl. IIb, group F, where we see them ranging from 1 to 12. In one case (Pl. IIb. IX. 12) we can count 15. Whether they all signify numerals cannot be dogmatically asserted, but some of them obviously suggest it. In the ninth row over T^s we have 2, 4, 5, 6, 9, 10, 11, 12, and 15 strokes. In the tenth row we have only 4 in the first group; 3 and 4 in the second group; and 4, 5, 6, 7, and 8 in the third group. The long strokes in the line occur in groups of 1, 2, 3, 4, and 5. The smaller strokes show 1, 2, 3, 4, 5, 6, 7, 8, 9, and 12. It is difficult to say whether these are different systems of enumeration, or whether some represent tens, hundreds, &c.

Conclusion

If we leave aside the additional strokes and compounds, the actual number of signs in the Indus Script, according to the present reckoning, is 27 objects and 27 geometrical forms, besides numerals, brackets, and two magic emblems. The number is increased to 474 (the remainder 63 being numerals, &c.) by the following two principles:

- (i) by combination with other signs;
- (ii) by the addition of strokes (*a*) internal, (*b*) external, from 1 to 6, besides the arch-like sign.

The combinations are always with some recognizable objects, and strokes are found added to all but the homo-, snake-, wheel-, vehicle-, and bow-and-arrow-signs.

Can we draw any conclusion regarding their significance? Suggestions can be made, and have already been made, but nothing definite can be asserted in the present state of the materials. One thing is certain, that the Indus Script, in its ultimate analysis, is not very complicated. Probably the two fundamental principles of combinations and stroke-additions, if they survived, influenced the formation of the conjuncts and the open syllables in the later historical Indian scripts.

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APPENDIX TO CHAPTER 2

The Indus Script and the Later Symbols

MANY writers have loosely compared the signs in the Indus Script with the symbols occurring on the punch-marked coins. About eleven recognizable symbols have also been found on a copper band discovered at

Patna. A few are known from Kumrahar columns and from the Ram-purva copper bolt, and some have been noticed on copper plates, the best known being on the Sohgaura plate. In fact such symbols are in use right down to the present day in India, and the village women can be seen decorating their floors and walls with them. Today they hardly signify more than auspicious marks.

The signs in the Indus Script show a system of writing, governed by two definite principles, as described above. If from this system a few symbols are taken out and shown to occur at random on coins and other later objects, it does not prove the continuity of the script, much less, as Dr. C. L. Fabri asserts, that the devices on the punch-marked coins are 'a survival of the Indus civilization'. Unfortunately, Dr. Fabri wrote at a time (1935) when very little study of the punch-marked symbols had been made. Now we are in a better position to examine these symbols in the published photographs. After a thorough comparison of the plates I have not found more than fifteen symbols which bear close resemblance to the signs in the Indus Script. Some of them are Pl. Ib. iv. 1, 2; Pl. IIa. i. 1, 2, 3, 5, 6; Pl. IIa, viii. 2, 7; Pl. IIa. x. 8; Pl. IIb. i. 1, 5; Pl. IIb. ii. 2; and Pl. IIb. ix. 5. A few more may be discovered in future. However, it is important to note that this small number has been found out of 537 signs of the Indus Script and nearly the same number on the punch-marked coins. Dr. Fabri calls the coin symbols 'pictograms', and bases his argument mainly on Theobald's drawing of these three symbols: . Theobald's drawings cannot be checked, as the photographs of them are not published. Fortunately, I found the same symbols given by P. N. Bhattacharya (pl. II, no. 64 of his publication), but on referring to his photograph in pl. X, I found only one (no. 1338) of the three references (the two others being 1335 and 1342) to be correct. Even on this one coin the central symbol is clearly an elephant, and not as given by these authors. I have discarded the coin animal-figures as these are not included in the Indus Script. It is again important to note that the system found in the Indus Script cannot be traced on the coins at all. In fact the coin symbols do not represent writing. They are to be taken as pure symbols, the meaning of which has to be determined in the context in which they are found. The Tantric symbols are other similar signs which were used to express the cryptic Tantric formulae in the medieval period. These can hardly be taken to be a 'survival' of the Indus Script, nor can they throw any light on the interpretation of that script.

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ORIGIN OF BRĀHMĪ

SINCE Bühler wrote *On the Origin of the Indian Brāhma Alphabet*, no new material has been found which could throw further light on this vexed question. Ojha¹ critically analysed the derivations proposed by Bühler and showed that the differences in the letter-forms, except in a few cases, were so fundamental that the Brāhmī forms could not be derived from those of North Semitic characters. The discovery of the Indus Valley writing has led some scholars to guess that Brāhmī was locally developed out of the Indus Valley system. But no one has been able to demonstrate how this evolution could take place.² In fact, the long gap between the time when the Indus Valley writing was in use and that when Brāhmī is first attested throws doubt on such a supposition. However, in recent years some further points have emerged from the discussion on the origin of the alphabet,³ which enable us to review the origin of Brāhmī afresh.

Before we tackle the problem, it is necessary to disabuse our minds and remember that the development of Brāhmī was not an isolated phenomenon. Its origin and growth are rooted in the civilization of the Ancient World of which India was a member. The discovery of the Indus pictographs or ideographs, or whatever that system of writing was, provides ample evidence of direct contact between India and the cultural centres of Western Asia. The appearance of the Indo-Aryans in history further strengthened this contact. Whether the Indian Aryans were literates or not is a different question, but it may be conceded that they were in contact with peoples who knew the art of writing. However, we have no definite evidence of the Indian Aryans practising this art. Ojha⁴ has given an analysis of the literary evidence and traced the

¹ *Bhāratiya Prācīna Lipimālā*, pp. 17-31.

² See above, pp. 19-21.

³ See Diringier, *The Alphabet*, London, 1949, pp. 195-221, and his bibliography; I. J. Gelb, *A Study of Writing*, London, 1953.

⁴ Op. cit., pp. 1-16.

concept of the letters (*akshara*), the vowels and the consonants, and the grouping of the last into *ghosha* consonants, *mūrdhanya* (cerebral), *dantya* (dental) letters, &c., in the *Upanishads* and the *Āraṇyakas*. In the *Aitareya Brāhmaṇa* (5. 32) he finds *om* stated to be formed by the combination of *akāra*, *ukāra*, and *makāra*. Later still in the works of the grammarians we find minute descriptions of the letters, the rules for their combination, and the changes that they undergo. Yet we have no concrete evidence of alphabetic writing in India before the time of Aśoka. How then are we to explain these concepts evidenced in the early Sanskrit literature? Some may maintain that the Brahmins, being fastidious in the pronunciation of the Vedic *mantras*, were led to this phonetic analysis which found perfection in the hands of the grammarians, while others would surely find parallels in the contemporary attempts made in Western Asia at the evolution of an alphabet. It is in Western Asia alone that the different stages in the evolution of the alphabet are more or less clear, but in Sanskrit literature, until we come to the time of the grammarians, acquaintance with the vowels and the consonants is superficial. Diringer¹ rightly maintains the alphabet to be originally an invention possibly in one region; it is no wonder that the principle underlying alphabetic writing soon spread with trade and commerce, and it may be suggested that as the Brahmins found this principle a great help in their Vedic recitals, they developed it further in their grammatical treatises.

The precedence of grammar over the Indian system of writing is indubitably proved by a critical analysis of the earliest examples of writing known in India.² The phonetic system of Indian grammar, though it conceives of vowels and consonants, still does not have pure consonants. Here we have a system which I. J. Gelb describes as being in the syllabic stage, but this syllabary has been further standardized. Each consonant, when not followed by an explicit vowel, inherently implies only one vowel, i.e. *a*, and no other. This peculiar characteristic of the Indian system is traced by Diringer³ 'to the influence of the Aramaic language, in which the final *aleph* predominated'. But the necessity of this inherent *a* is also felt in the Sanskrit language, in which the consonants are required to be pronounced with some definite vowel unless they

¹ *The Alphabet*, London, 1949, p. 216.

² See also, pp. 46-47.

³ *The Alphabet*, London, 1949, p. 336.

are explicitly characterized as vowelless. It is therefore not necessary to look further afield for this feature. The peculiar character of the Indian alphabet is the contribution of the Indian grammarians, and, whatever script has been used in India to express this language, this notion of the alphabet has remained constant. It is essential that the nature of this alphabet is understood before the question of the origin of any of the scripts is taken up.

In the arrangement of the letters the vowels come first. These are arranged here in the order of short, long, *guṇa* and *vṛiddhi*:

<i>Short</i>	<i>Long</i>	<i>Guṇa</i>	<i>Vṛiddhi</i>
(1) a	(2) ā	..	..
(3) i	(4) ī	(10) e	(11) ai
(5) u	(6) ū	(12) o	(13) au
(7) ṛi	(8) ṛī	..	..
(9) ḷi	..	..	..

Then follow the consonants with the inherent *a*, divided into twenty-five mutes falling into five classes, four semi-vowels, three sibilants, one aspiration, one pure nasal, and three voiceless spirants. According to some the pure nasal and the three voiceless spirants are to be taken as vowels. Each class of the mutes consists of hard and soft consonants, their aspirates, and a corresponding nasal:

<i>Hard</i>	<i>Aspirate</i>	<i>Soft</i>	<i>Aspirate</i>	<i>Nasal</i>
ka	kha	ga	gha	ṇa
cha	chha	ja	jha	ṇa
ṭa	ṭha	ḍa	ḍha	ṇa
ta	tha	da	dha	na
pa	pha	ba	bha	ma

The four semi-vowels are *ya*, *ra*, *la*, and *va*, and the three sibilants are *śa*, *sha*, and *sa*. The aspiration is *ha*. The pure nasal is *anusvāra* (*ṁ*), and the three voiceless spirants are *ḥ* (*visarga*), *ḥ* (*jihvāmūliya*), and *ḥ* (*upadhmānīya*).

As the consonants contain an inherent *a* there arose the concept of the *halanta* or the vowelless consonant. This concept led to the formation of the conjuncts, which have their own regulations as provided in the rules of *sandhi*.

This alphabetic system is maintained in India, with minor additions or omissions, down to the present day, though it is not phonetically suited to the various provincial languages in India.

It is on the basis of this alphabet that we have to understand the origin and the development of Brāhmī.









There is no exact correlation between the Brāhmī character and the alphabet given above—a point which decidedly proves that neither was Brāhmī the pure invention of the Indian grammarians nor was the above alphabet developed out of Brāhmī. As shown in Fig. 1, the exceptional formation of *kha* and *tha*, which

DERIVED LETTERS IN BRĀHMĪ

UNASPIRATES

Ga  , Cha Ja Ṭa Ḍa Da Pa Ba 






ASPIRATES

Gha Chha Jha Ṭha Ḍha Dha  or Pha Bha  or 

EXCEPTION

Ka Ta Kha  ,  , Tha 

ANOTHER EXCEPTION

Tha  → Ṭha  → Ṭa  → Ḍa  → Ḍha 

ANOTHER EXCEPTION

Na  → Ṇa But Ja  → Ṇa Jha  → Ṇa 

FIG. 1

have no connexion at all with *ka* and *ta*, is a sufficient proof of the former, and the derivation of the cerebral letters from *tha* supports the latter. However, the influence of phonetics on the formation of the Brāhmī script cannot be altogether brushed aside. Despite exceptions, we find some regularity in the evolution of the signs. As shown in Fig. 1, the aspirated letters have regular additions with the exception of the two. Each class of mute has been provided with a nasal, as required by the grammar, and

further a dot is invented for the *anusvāra* (Fig. 2). Similarly, *guṇa* and *ṛiddhi* have also regular additions. But if these forms, which are made by additional strokes, are taken out, we actually get three

INTER-RELATION IN BRĀHMĪ VOWELS			
1 A	𑀅	Ā 𑀅̄	Am 𑀅̄
2 I	𑀆	Ī 𑀆̄	E 𑀆̄
3 U	𑀇	Ū 𑀇̄	O 𑀇̄
CONSONANTS			
1 Ka	𑀅		
2 Kha	𑀆, 𑀇, 𑀈		
3 Ga	𑀉, 𑀊	Gha 𑀋	
4 Cha	𑀌	Chha 𑀍	
5 Ja	𑀎	Jha 𑀏, Ña 𑀐, Na 𑀑	
6 Tha	𑀒	Ṭha 𑀓, Ṭa 𑀔, Ḍa 𑀕, Ḍha 𑀖	
7 Ta	𑀗		
8 Da	𑀘	Dha 𑀙 or 𑀚	
9 Na	𑀛	Ṇa 𑀜	
10 Pa	𑀝	Pha 𑀞	
11 Ba	𑀟	Bha 𑀠 or 𑀡	
12 Ma	𑀢		
13 Ya	𑀣, 𑀤		
14 Ra	𑀥, 𑀦		
15 La	𑀧		
16 Va	𑀨		
17 Śa	𑀩		
18 Śa	𑀪	Sha 𑀫	
19 Ha	𑀬		

FIG. 2

vowels—*a*, *i*, and *u*, and nineteen consonants—*ka*, *kha*, *ga*, *cha*, *ja*, *ta*, *tha*, *da*, *na*, *pa*, *ba*, *ma*, *ya*, *ra*, *la*, *va*, *śa*, *sa*, and *ha*—a total of twenty-two letters, exactly the same number as found in North Semitic or Aramaic. The cognate sounds can be correlated as follows:

'aleph	<i>a</i>	kaph	<i>ka</i>	gimel	<i>ga</i>
'ayin	<i>i</i> or <i>e</i>	qoph	<i>kha</i>	tšad	<i>cha</i>

zayin	<i>ja</i>	pe	<i>pa</i>	lamed	<i>la</i>
taw	<i>ta</i>	beth	<i>ba</i>	waw	<i>va</i>
ṭeth	<i>tha</i>	mem	<i>ma</i>	shin	<i>śa</i>
daleth	<i>da</i>	yod	<i>ya</i>	samekh	<i>sa</i>
nun	<i>na</i>	resh	<i>ra</i>	he	<i>ha</i>

The only letter left unconnected is *kheth* in North Semitic and *u* or *o* in the Brāhmī.

Of these letters the similarity is clearly seen in the following:

NORTH SEMITIC ⲗ		BRĀHMĪ	
EARLY PHOENICIAN			
'ALEPH	Ⲁ . Ⲁ	A	अ . ँ
GIMEL	Ⲃ	Ga	ग
ṬETH	Ⲅ	Tha	ठ
YOD	Ⲇ	Ya	य
LAMED	Ⲉ . Ⲉ . Ⲉ	La	ल
PE	Ⲋ . Ⲋ	Pa	प
SHIN	Ⲍ . Ⲍ	Śa	श . ष
TAW	Ⲏ . Ⲏ	Ta	त
QOPH	Ⲑ . Ⲑ	Kha	क
'AYIN	Ⲓ . Ⲓ	E	इ
ZAYIN	Ⲕ	Ja	ए

Semitic forms are adapted from
Diringer's *The Alphabet*

FIG. 3

This similarity hardly leaves any doubt that Indian Brāhmī was created on the basis of the North Semitic letters. But Brāhmī is not a slavish adoption of the North Semitic signs. There is considerable local genius visible in its formation. The most fundamental change introduced by the Indians is in giving a definite direction to the letters. The way in which 'aleph is changed into *a*, lamed into *la*, &c., suggests that Indian Brāhmī was written from left to right from the very beginning.

Attempts have been made in the past to show that Brāhmī was originally written from right to left and that only later was its direction changed. Bühler was the first to propound this hypothesis on the basis of a faulty coin from Eran¹ in which some letters

¹ See below, p. 61.

are found to be reversed. Though many others have clearly demonstrated Bühler's mistake, Diringer once again reasserts the claim and quotes as another example the Yerragudi M.R.I. of Aśoka.¹ He concludes: 'As Mr. Sahni points out, this inscription leaves no doubt that the *boustrophedon* style was known in the time of Aśoka. There is, thus, sufficient evidence of the existence of an earlier Brāhmī script written from right to left, followed . . . as in the development of the early Greek script by a transitional system of writing in *boustrophedon* style.'² If further examples of this type prove the point, I could cite many more from Ceylon.³ But mere number is not conclusive. The argument must be based on technical analysis of the evidence. The Yerragudi inscription is a barbarous example of writing, in which the direction can hardly be said to be *boustrophedon*, and the Ceylonese inscriptions, which are all very late, betray the writers' ignorance of the true system rather than preserve an old practice. Such mistakes are found in several other inscriptions. In the Bhattiprolu inscriptions⁴ there are some letters which are similarly reversed. In one of the Chālukyan inscriptions⁵ the writing goes from below upwards. These stray examples cannot in any way change the style of the main character, which from the very beginning, when Brāhmī was created on the basis of the North Semitic writing, had determined its direction from left to right.

There has also been a controversy over the question of the particular branch of the Semitic alphabet from which Brāhmī is 'derived'. Opinions have varied from the South Semitic to North Semitic, or particularized to Phoenician or to Aramaic. As has been shown before, the similarity with the North Semitic letters is the closest. Within this broad division Diringer⁶ prefers the 'Aramaic alphabet as the prototype of the Brāhmī script', since Aramaic is known to have been used right up to the borders of India. But the choice need not be limited to Aramaic alone, as the Brāhmī letters are not literally 'derived' from the Semitic as is commonly understood, but are only based on them. The idea may have been brought from further afield. This supposition is supported by the fact that the two basic forms of *a* in Aśokan Brāhmī have their counterparts only in North Semitic, but not in Aramaic.

Whatever may be the particular source of inspiration, Brāhmī is a

¹ *An. Rep. A.S.I.*, 1928-9, pp. 161-7.

³ See below, p. 217.

⁵ See below, p. 211, no. 4. III.

² Diringer, *op. cit.*, p. 339.

⁴ See below, p. 70.

⁶ *Op. cit.*, p. 336.

creation of the Indian Pandits. The script has been evolved to suit the local grammar, and hence the semi-syllabic character of Brāhmī and the invention of the strokes for the medial vowels. The only case where the script conflicts with the grammar is in the formation of the conjuncts.¹ Here we find two or three letters placed one above the other, disregarding the presence of the inherent *a* in the consonants. The same is the case when the medial strokes are applied to the consonants. In these examples they are taken to be pure consonants, at least in the early writings known from India. Later on the first letter of the conjunct came to be mutilated, suggesting the loss of the inherent *a*. But this is a later practice. The original construction as seen in Aśokan Brāhmī still preserves the true alphabetic nature of the writing, and thus, despite innovations, Brāhmī falls within the general class influenced or inspired by Semitic.

In the present state of our knowledge we cannot be certain of the date when this writing was introduced into India, but the inscriptions of Aśoka contain the earliest Brāhmī at present known to us.

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¹ See below, p. 44.

ASOKAN BRĀHMĪ

Definition

THE Indian alphabetic¹ system, as developed fully by the Sanskrit grammarians, is not at present known from actual specimens of writing till a very late period. This system, so far as it was needed by the popular language of the inscriptions, found expression at the same time in two scripts, the Brāhmī and the Kharoshthī. These were used in the inscriptions issued by a king who bore the title of Devānampiya Piyadasi, belonged to Magadha (South Bihar), had his capital at Pāṭaliputra (modern Patna), and whose name, as given in two of the records, was Aśoka. He has long been identified with the Mauryan king of the same name, reigning between c. 272 and 231 B.C. The country over which he ruled was called Jambudvīpa, its limits being defined by the places where the inscriptions have been found as well as by the names of the bordering kingdoms of the Choḍas, Pāḍas, Satiyaputas, and Keralaputas in the south and those of the Yona (Greek) kings in the north-west. It covered almost the whole of the subcontinent of India and Pakistan north of the Kaveri Valley. Throughout this vast empire the inscriptions, called (*dhamma-*) *lipi*, *libi*, or *dipi*, were written in these two scripts—the Kharoshthī used in the Indus Valley zone, and the Brāhmī in the remaining parts. The Brāhmī script of these inscriptions is termed here 'Aśokan Brāhmī', as it is well defined in age, language, content, and common character.

Material of writing

The inscriptions are engraved on stone pillars (*silāthambha*) and stone slabs (*silāphalaka*). The pillars are monolithic, made of Chunar sandstone, chiselled to a round shape, rubbed, and highly polished. The places where the pillars are found lie in the Ganges Valley, except Rummindei and Nigali Sagar, which are in the

¹ The term 'alphabetic' has been used here in a popular sense, as the Indian scripts are generally so called.

Nepalese Terai but not far from the river Gandak—a tributary of the Ganges—and Sanchi in Central India, on the main route from Delhi and Kanauj to Gujarat and the south. Probably these pillars were transported by river, and short distances overland were covered by bullock-carts, as was done later in the time of Sulṭān Fīroz Shāh Tughlaq, who transported some of the pillars. The huge expenditure on transport suggests that the stone-cutter's art was not then widespread, and, combined with this fact, the difficulties in carrying the pillars to distant places by road explain very well their absence outside the Gangetic region.

The term *silāphalaka* (stone slab), used by Aśoka, must refer to the blocks of rock on which the edicts are engraved, as only one stone slab (the Calcutta Bairat slab) has so far been discovered. The rocks are of different types—granite, quartzite, trap, and others, whichever was available on the spot, but the outstanding block in the locality was always chosen for the inscriptions. No attempt was made to prepare the surface, except in the case of the pillars, where engraving was done after polishing. In the case of rocks a naturally flat surface was selected. As a result the pillar inscriptions are better written, while the rock inscriptions are comparatively rough.





Technique of engraving

Rock engravings of about this period and of slightly later date¹ have been discovered in India at several places. Here the figures are drawn by scratching. But the technique of the engraving of the Aśokan inscriptions was far in advance of these. We find the technical terms *lipikara* or *dipikara*, derived from the original Achaemenian *dipi* and used with the verb *likhite* or *lekhite*, from the root *likh*, 'to draw' or 'to write'. In the Shahbazgarhi R.E.² the verb used is *nipistam* or *nipesitam*, formed from the root *ni-pis*, equivalent to the modern Persian *navishtan*, also meaning 'to write'. Hence the word *lipikara* or *dipikara* is taken to mean 'writer'. Bühler translates it as 'clerk'. These terms from the Aśokan inscriptions do not explain the complete process involved in engraving on stone. But it is significant that the emphasis was laid on 'writing', because the writer's part was of primary importance.³

¹ D. H. Gordon, *Prehistoric Background of Indian Culture*, Bombay, 1958, pp. 98–118.

² For a complete list of the Aśokan inscriptions, see Bibliography, pp. 48–49.

³ Compare Aśoka's remark in the 14th R.E.

Another term for engraving found in literature is *chhindati*, from the root *chhid*, meaning 'to cut'. These two verbs together describe the whole process of engraving. There were two stages: the first was the writing of the inscription on the stone by a *lipikara*, and the second was the actual work of cutting the letters on the stone. The former was done by a literate man, but the latter was the work of a stone-cutter who was probably illiterate, judging from the way he blindly followed the long wavy lines of the writer. The letters were cut by chiselling along the lines drawn by the writer, but the chiseller did not always follow the same process of forming the letters as was done by the writer. The writer, of course, was responsible for the shape and the style of the letters, but the chiseller made slight variations; e.g. while cutting the letter *ya* he might begin with  or , and then add the second hook as  or . These variations do not make any fundamental difference in the actual form of the letters. The very technique of engraving implies such variations. But it is important to note that the engraver's part was secondary in the Āsokan inscriptions. It was the writer who dictated the style of writing.

It was on the writer's method of producing the letters on a given surface that their actual shape depended. Leaving aside individual mannerisms, which are also a factor to be considered, we can detect the final influence of the tool of writing on the shapes of the letters. Individual mannerisms, if common to a large group of writers in a given region, determine the regional school, but the introduction of new tools results in a new style of writing, with consequent simplification or elaboration of shapes. After all, writing is an art, and its principles are not different from those governing other arts. In the Āsokan inscriptions the writer used the simplest of tools—a longish piece of chalk, charcoal, or haematite—so that the lines drawn were uniform in width. His hand is clearly discernible in the long wavy lines at Girnar and Jaugada. This device cannot result in the formation of the so-called 'serifs' on the tops of verticals. Bühler was mistaken in detecting these marks in Āsokan Brāhmī. Their formation is due to the introduction of a new tool in a subsequent period (see Chapter 5). The size of letters again is not a fundamental factor, for it depends on the available space. More important is the ratio between the verticals and the horizontals; double is usual, but longer forms, as in the Mysore inscriptions (i.e. Brahmagiri, Siddhapur, and

Jatinga Ramesvara), and shorter (as in Kosam P.E.), are also to be found.

Method of reproduction

It is almost impossible to reproduce on paper all the peculiarities of the writer and the engraver. The photographs and the tracings of the inscriptions hitherto published do not tell us as much as we can learn from the original stone. Moreover, one cannot be certain whether one has given all the variations of a particular letter unless one traces all its occurrences in the inscriptions. Herein lies a difference between handwriting and mechanical reproduction. The most important point is to find the manner in which the letters were actually formed; once we discover this, the shapes emerge of themselves. In Pls. III and IV, illustrating Aśokan Brāhmī, no attempt has been made to trace the letters. They have been copied from the published photographs after determining the various methods of their formation, and this process has given the important varieties. It has also helped to correct many mistakes made by earlier palaeographers. The letters have not been drawn to scale, as this was not possible from the published photographs, and hence no conclusion should be derived from the drawings as regards their size and proportion. The rare types are shown in brackets.

Arrangement of plates

There is at least fifteen to twenty years' difference between the writings of the earliest and the latest records, but no gradual improvement in the engraving of the letters is to be noticed, except that the pillar inscriptions are better written than the rock inscriptions. Hence the letters cannot be arranged on the basis of chronology. It would again be wrong to separate rock inscriptions from pillar inscriptions, as there is no difference in the actual method of writing. The regional groupings—northern and southern (according to the theory of Bühler and, following him, others), eastern and western—do not work out, as exactly the same methods are traceable in different regions. The various inscriptions show individual characteristics, and I have found them hard to reduce to any one or two systems. Even on one particular rock different hands are traceable. As a result it was considered desirable to copy in separate rows as many hands as possible. These rows of alphabets

have then been classified in two plates (III *a, b*) showing letters from the pillar and minor pillar inscriptions and the Kalasi R.E., all of which come from north of the Vindhyas. The pillar inscriptions are on a prepared surface, but they hardly differ in style of writing from the rock edicts, which are on a natural rock surface. Pl. IV *a, b* depicts the writing from the remaining rock edicts and minor rock inscriptions, all of which come from south of the Vindhyas. The plates also include the Bairat slab, the Gujarra and Sasaram M.R.I., and the Barabar cave inscriptions. Except for the last these inscriptions are engraved on natural rock surfaces. The few North Indian inscriptions are given here for the sake of comparison with the inscriptions of the south. But, as the plates show, there is hardly any recognizable basis on which to differentiate between northern and southern styles.

The inscriptions suggest that knowledge of writing travelled along the imperial routes, and that the imperial scribes were the carriers of Aśokan Brāhmī to the distant parts of the empire. Otherwise it is difficult to explain how the same type of the script is to be found in the far-flung areas of north, south, east, and west. Since in the north-west Aśoka used Kharoshthī, Aramaic, and Greek¹ scripts, it is very unlikely that he would not have used regional scripts in other parts of his empire, if such had existed. Aśokan Brāhmī does not tend to show regional variations, but the Aśokan inscriptions mark the process of cultural infiltration into the distant parts of this subcontinent.

Style of writing

The writing can be said to follow the ink style, as is clear from the use of dots in some letters, e.g. *kha*, *ja*, and *ḍa*, and from the free movement of the hand resulting in round forms. It is seldom that the scribe attempts to achieve angularity, and in most cases where he does so, e.g. *u*, *e*, *o*, *ka*, *ga*, *jha*, *ṇa*, *ḍa*, *ṇa*, *ta*, *na*, *ba*, and *bha*, he is governed by the original form of the letters rather than by his own inclination. The optional examples are *a*, *ā*, *gha*, *cha*, *ja*, *ṭa*, *ḍha*, *da*, and *śa*. There is no abruptness in writing, the only exceptions being in the minor rock inscriptions of Mysore State, where in the formation of *a*, *ja*, *ma*, *yi*, and *hi* the hand stops and begins from another direction to complete the letters. But this

¹ 'Une bilingue Gréco-Araméenne D'Aśoka', by Daniel Schlumberger in *Journal Asiatique*, 1958, pp. 1-48.

defect might be due to the engraver, and not to the writer. Each letter is distinctly formed, and no cursive writing in the way of continuous drawn-out lines is noticeable. This last tendency is a characteristic of most Indian scripts, though in a very few cases, especially in much later mercantile documents, this rule is broken. The cursive hand, if at all traceable, is detected in the medial vowels and the conjuncts. To this general rule the letters *cha*, *ja*, and *va* are exceptions, as their formation is much varied. In the Kauśāmbi Queen's Edict (hereafter called Kauśāmbi M.P.I.) the letters *da* and *ḍa*, and in the Kalasi R.E. in one place the letter *ḍa*, are very cursively drawn.

The initial vowels in Aśokan Brāhmī

Only six initial vowels were used in Aśokan Brāhmī. Of these, three are basic: *a*, *i*, and *u*; while three others, *ā*, *e*, and *o*, are secondary forms.

The letters a and ā. Bühler distinguishes 'eight most important' forms merely from the external shape. From the point of view of technical formation they fall under three broad heads:

(i) In this series the vertical is drawn first and the two curves to the left of the vertical subsequently. The varieties originate as the two curves come closer to each other and finally their one arm merges with the other (Fig. 4. I). This series is found in most of the columns, but is rare at Girnar.

(ii) In this series the curves on the left are replaced by straight lines which make an acute angle. They are drawn first and then the vertical is made. Sometimes the vertical is bent to touch the apex of the angle, or a short bar is drawn to join the apex with the vertical (Fig. 4. II). The first two examples are seen in the Mysore inscriptions (Pl. IVa), the third in the Girnar R.E., Sopara R.E., and Erragudi, Rajula Mandagiri, and Gujarrā M.R.I.s. The last can be seen in the Dhauli and Jaugad R.E.s, and Kosam P.E., Girnar R.E., and Mysore inscriptions.

(iii) In the third series the vertical is drawn first and then one of the left strokes is brought to the middle of the vertical either straight or cursively, and from this meeting-point another stroke goes out either straight or cursively (Fig. 4. III). These forms are distributed fairly evenly in most of the columns, but are rare at Girnar.

The long \bar{a} is generally formed by adding a horizontal bar to the right of the vertical where the left strokes meet. But in the Girnar R.E., Gujarra M.R.I., and Erragudi and Rajula Mandagiri M.R.I.s the horizontal bar is added to the top or near the top of the vertical.

(I) $\text{𑀓} \rightarrow \text{𑀔} \rightarrow \text{𑀕} \rightarrow \text{𑀖} \rightarrow \text{𑀗}$

(II) $\text{𑀘} \rightarrow \text{𑀙} \rightarrow \text{𑀚} \rightarrow \text{𑀛}$

(III) $\text{𑀜} \downarrow \text{𑀝}$ or $\text{𑀞} \downarrow \text{𑀟}$

(IV) (U) $\text{𑀠} \rightarrow \text{𑀡} \rightarrow \text{𑀢}$
but also $\text{𑀣} \rightarrow \text{𑀤}$

(V) $\text{𑀥} \rightarrow \text{(Kha)} \text{𑀦} \rightarrow \text{𑀧} \rightarrow \text{𑀨}$

(VI) $\text{(Ga)} \text{𑀩} \rightarrow \text{𑀪} \rightarrow \text{(Gha)} \text{𑀫}$

(VII) $\text{(Cha)} \text{𑀬} \text{ or } \text{𑀭} \rightarrow \text{𑀮} \rightarrow \text{𑀯}$

(VIII) (Ja) (a) 𑀰 or (b) 𑀱 or (c) 𑀲 (d) 𑀳

(IX) (Jha) $\text{𑀴} \rightarrow \text{𑀵} \rightarrow \text{(Ña)} \text{𑀶}$

FIG. 4

The letters i and e. The letter *i* consists of three dots placed trianglewise, and when these dots are joined by lines they form *e*. In most cases the apex is on the right; sometimes it is on the left, as in the Girnar R.E.s; sometimes it is at the top, as at Maski, but very rarely at the bottom, as in the Sopara R.E. and Sarnath M.P.I. *E* is never seen with its apex downward. The horseshoe form of *e*, which Bühler finds in the Kalasi R.E., is unjustifiable. Three triangular points are the main thing in the formation of *i* and *e*, and they cannot result in a horseshoe form. At best the lines joining these points might be slightly curved, and very rarely this is noticeable. It is not shown in the plates illustrated.

The letters u and o. *U* is formed with two straight lines meeting generally at a right angle, and very rarely at an acute angle, the angle opening on the right. The vertical line is usually longer than the horizontal, suggesting that the former was drawn first. *O* is formed by adding a horizontal bar to the top left of *u*, but the whole letter is made in one action starting from the top left end, and consequently in *o* the middle vertical line is inclined (Fig. 4. IV). In the Dhauli and Jaugad R.E.s the letter *o* is formed in the reverse fashion, as shown in the same figure.

The consonants in Aśokan Brāhmī

Thirty-three consonants, including the rare North Indian *ḍa*, were used in Aśokan Brāhmī. Their formations are described below:

(i) The letter *ka* consists of a simple cross. Occasionally the vertical line is lengthened, as in the Mysore inscriptions, Erragudi R.E., and Rummindei M.P.I. But in these cases, except at Erragudi, all the letters have longer verticals. At Siddhapur alone the horizontal line is inclined on the left. Bühler's 'dagger-shaped *ka*' is not traceable. That was the result of a new technique (see Chapter 5).


(ii) The letter *kha* resembles a fish-hook upside down, with a dot or a circle at the end of the longer arm, but the primary form is the latter, as shown in the last chapter (Fig. 4. V). This dot or circle is very rarely missing (Delhi-Topra P.E., Pl. IIIa). The long arm is bent in some cases, thus making a cursive form (Delhi Topra P.E. VII). In the Mysore inscriptions the dot is thickened, recalling the circle. *Kha* with a circle is confined to North Indian inscriptions but is found in the Dhauli and Jaugad S.E., while *kha* with a dot is common to all the inscriptions except the Kalasi R.E. *Kha* with a triangle in place of a circle, noticed by Bühler at Kalasi, is hardly observable. The triangle is really a cursive circle, as shown in Pl. IIIa (Kalasi R.E.).

(iii) The letter *ga* is formed by two straight lines meeting at an acute angle which opens downwards. Sometimes the apex of the angle is rounded off as in the Barabar cave inscriptions (Pl. IVa).

(iv) The letter *gha* is formed from the rounded form of *ga* turned upside down, but its left arm is extended upwards and a vertical stroke is added in the middle (Fig. 4. VI). This round

form is very common, but in the Kalasi R.E. (XI–XIV) and rarely in the Dhauli and Jaugad R.E.s (Pl. IVa) it has a flattened bottom. The S.E. has no angular form as noted wrongly by Bühler.

(v) The letter *cha* has three main varieties: the first is formed by drawing a semi-circle to the bottom left of a vertical line. In this case the vertical line was probably drawn later (Pl. IIIa, Delhi Topra P.E. VII). In the second variety the vertical line is drawn first and then the semi-circle is made. As a result it is always less than the arc of a semi-circle. This second variety, when written cursively, produces the angular *cha*. It was probably formed in a single action beginning from the vertical (Fig. 4. VII). The second variety is most common, while the third is an optional form.

(vi) The letter *chha* is formed from *cha* by duplicating the semi-circle on the right, and thus completing the circle. Usually the circle was drawn first and then the vertical. In the reverse process, i.e. when the vertical was made first, the circle took the form of an oval; e.g. the Delhi-Topra P.E. (I–VI), and Sanchi M.P.I. Sometimes this resulted in two circles (Pl. IIIa, Kalasi R.E. I–X). The *chha* with a notched head-mark, , shown in Bühler's chart, from the Kalasi R.E., is a mistaken reading. This is a much later development (see Chapter 5).

(vii) The letter *ja* has two basic forms, the angular with three arms and the round with double curves; the latter is most common, and the first is optional in many inscriptions. The round form has several sub-varieties, depending on the formation of the middle arm (Fig. 4. VIII). Of these (*b*) is not the only type in the southern inscriptions, as is maintained by Bühler, though it is confined to the Girnar and Mysore inscriptions. (*c*) and (*d*) are present in the northern inscriptions along with others.

(viii and ix) The letter *jha* has only the angular form made by adding on the right an angular hook to the middle of the vertical so that the mouth opens upwards. Variations are seen in the shortening of the hook as in Pl. IIIa (Delhi-Topra P.E. VII), or in the angle between the hook and the vertical (Fig. 4. IX). *Ña* is this form of *jha* upside down with a stroke added to the top left.

(x) The letter *ta* has only one main form, a semi-circle open to the right, but more often it is not a full semi-circle (Erragudi R.E., Pl. IVa). Sometimes the angular form is cursively drawn by flattening the upper and lower arms (Pl. IVa, Gujarrā and Rupnath

M.R.I.; and Pl. IIIa, Delhi-Mirath, and Sarnath inscriptions). The process is given in Fig. 5. I.

(xi) The letter *ṭha* is a full circle.

(xii) *Ḍa* is formed by adding a vertical stroke to the top of *ṭa*, but the semi-circle of *ṭa* is straightened, and it looks like a step. It is drawn from the top downward in one action. It has only the angular

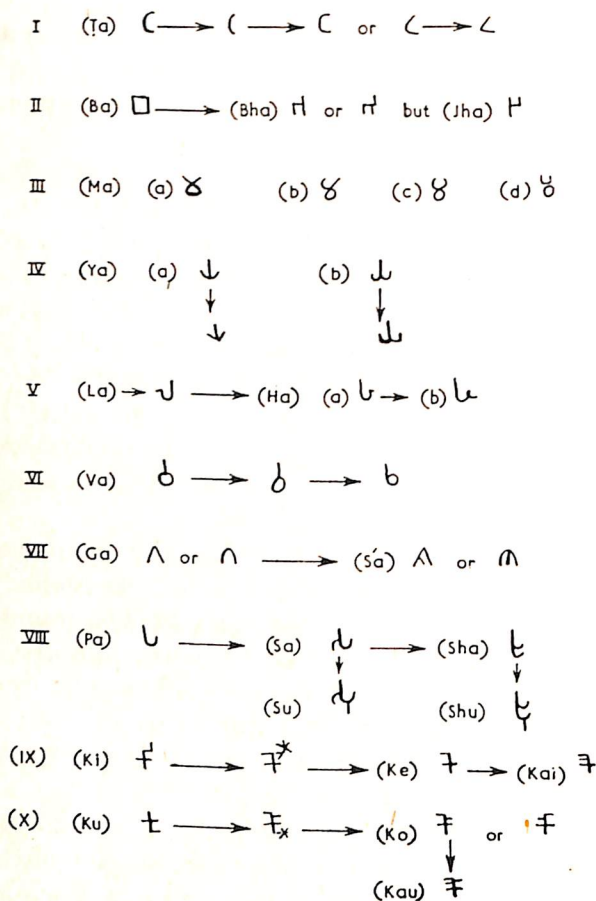








FIG. 5





variety. The round *ḍa* found in the Kauśāmbi M.P.I. (Pl. IIIa) and optionally in the Kalasi R.E. (XI–XIV) is an exception.

(xiii) *Ḍha* seems to have been originally formed by adding a loop on the right to the bottom of *ḍa*, as is seen at Siddhapur. But this angular variety is rarely seen (Delhi-Topra P.E. VII). The round form is very common. It is also drawn from the top downwards.

(xiv and xv) The letters *na* and *ṇa* should be taken together. *Na* is formed by drawing a perpendicular line on a horizontal base; while in the case of *ṇa* an additional horizontal line is given at the top of the vertical and at the same time both the horizontals are shortened in relation to the vertical line (Fig. 1). In some examples from the Mysore inscriptions the vertical is exceptionally prolonged.

(xvi) The letter *ta* is formed in several ways. The simplest is formed from an inclined straight line from the middle of which another short stroke is given at an angle either on the right or on the left as the case may be; e.g.  or . The curving of the additional stroke makes other varieties:  or . A different formation is obtained by appending an angle just below the vertical: , and this last also makes a variation when the angle is cursively drawn into a curve: . Two or three forms are found in the same inscription and hence no regional classification can be made.

(xvii) The letter *tha* has a dot in the centre of *ṭha*, i.e. a full circle (Fig. 1).

(xviii) The letter *da* has two main varieties, the angular and the round. The primary form is made up of a semi-circle, open on the left, with the addition of short verticals at either end; e.g.  → . In the other variety the semi-circle gives place to an angular form; e.g. . The lower vertical is sometimes cursively drawn, suggesting that the letter was usually formed in a single action beginning from the top, e.g. . The Kauśāmbi M.P.I. and Sarnath M.P.I. have very cursive forms.

(xix) The letter *dha* has two main varieties. The first resembles the Roman capital letter 'D', and the second is its exact reverse. The first is very common. Bühler is right in deriving it from *da*. In this case the verticals meet at the centre of the semi-circle instead of going farther away from it as in *da* (Fig. 1).

(xx) The letter *pa* resembles a fish-hook drawn to the right. Very rarely the angular form is seen (Pl. IIIb, Kalasi R.E. XI-XIV).

(xxi) *Pha* is formed by adding a loop to the hook of *Pa* (Fig. 1). Sometimes we find very cursive forms, when the vertical is inclined (Pl. IVb, Girnar R.E.; Pl. IIIb, Delhi-Topra P.E. VII).

(xxii) *Ba* makes two varieties, a square or a rectangle. The first is very common.

(xxiii) *Bha* is a sign similar to *jha* but turned upside down (Pl. IVb, Rupnath M.R.I.). Usually there is a notch between the vertical and the angular hook. But actually this letter is formed from *ba* (Fig. 5. II).

(xxiv) The letter *ma* has several varieties. The basic form is the bottom loop or circle with two additional strokes above. When the letter is drawn in a single action from the top stroke with one sweep, the result will be the *ma* of the Girnar R.E. (Fig. 5. IIIa). If in this action the line bends slightly at the beginning, the result will be something like Fig. 5. IIIb; if the line bends again at the end, we get another form (Fig. 5. IIIc)—a variety which is seen in many inscriptions. But the engraver has not followed the writer's principle. We can see him at Siddhapur (Pl. IVb) first drawing the circle and then supplying the upper strokes separately (Fig. 5. IIId); in the Erragudi M.R.I. (Pl. IVb) the upper strokes are drawn straight at an incline.

(xxv) The letter *ya* has two basic forms, the crescentic and the segmented. The first is made by drawing a vertical in the middle of the arc of a circle; while the second is formed by dividing this arc into two halves. Both have angular varieties. The process is shown in Fig. 5. IV.

(xxvi) The letter *ra* is not found in all the inscriptions. It has two varieties: (a) the straight vertical, and (b) the serpentine vertical.

(xxvii and xxviii) Both the letters *la* and *ha* are formed in the same way, with the only difference that the one is the exact reverse of the other (Fig. 5. V). Cursive forms of *la* can be seen in the Kalasi R.E., and of *ha* in the Delhi-Topra P.E. VII. The tick sometimes makes a little hook (see Dhauli and Jaugad R.E., Pl. IVb for *la*, and Erragudi R.E., Pl. IVb for *ha*). At Sarnath this tick is formed by a twist as shown in Fig. 5. Vb.

(xxix) The main variety of *va* is a circle appended to a vertical. But the circle becomes longish when the letter is drawn in a single action, and more often it appears like a loop on the right bottom of the vertical (Fig. 5. VI).

(xxx-xxxii) All the three sibilants are found in Aśokan Brāhmī, but the commonest is the dental *sa*, occurring in all the inscriptions. The other two are present in the Kalasi R.E. (XI-XIV), while palatal *śa* is found also at Kalasi (I-IX), at Maski, in the Mysore inscriptions and in a conjunct with *va* at Bairat. The

cerebral *sha* has also been read by Hultzsch and others at Sarnath and in the Kausāmbi M.P.I., but this reading is mistaken. As the forms of *sa* and *sha* do not differ much, there was often confusion on the parts of the writer, the engraver, and the reader. The same confusion prevails in the Mahasthan Brāhmī inscription.¹ All the three sibilants are found in Aśokan Kharoshthī, and the fact that the North-western Chapāḍa uses them in the Mysore inscriptions suggests that their occurrence is due to the hand of a person coming from the north-west.

The palatal *śa* resembles the form of *ga* with an additional stroke appended in its inner side (Fig. 5. VII). Both the angular and round forms are known. In the angular form the inner stroke is attached to the left arm almost parallel to the right arm, and in the round form the stroke falls from the apex.

The dental *sa* has an additional hook in the same direction attached to the long arm of the form of *pa* (Fig. 5. VIII). This hook is sometimes angular as in the Erragudi inscriptions (Pl. IVb), and is sometimes lengthened (Pl. IIIb, Kalasi R.E. I-IX); in some cases this hook starts just where the long arm of *pa* ends, and in rare cases it drops from the curve of *pa* (Pl. IIIb, Kalasi R.E. XI-XIV). In this last variety it is often confused with *sha*. In rare cases, e.g. at Girnar (probably owing to the engraver's mistake), the long arm is extended and the curve is added later, e.g. *l* → *l* (Pl. IVb). At Sarnath the cursive form is also seen, in which case the long arm is bent inwards.

In cerebral *sha* the curve is doubled and the separate hook is dropped. The main point to note is that the lower curve in *sha* is the primary one and it never takes the form of a hook, while the upper one is secondary, answering to the hook. This distinction is clear when we take into consideration the addition of the medial vowel *u*, which is always added to the primary curve (Fig. 5. VIII).

(xxxiii) In the pillar edicts one more letter, *ḍa*, is observed. It is used optionally only with three words: *eḍaka*, *duḍi*, and *paṇṇaḍasa*—the first two being the names of animals. It is formed by adding a dot at the bottom of the line of *ḍa*. This is the parent of the modern North Indian *ḍa*, in which case also a dot is placed below the form of *ḍa*.

¹ See below, p. 56.

The formation of the conjuncts

The conjuncts are formed by placing one consonant on the top of the other. Unlike the practice in modern Indian scripts, the first letter is fully formed and the second is cursively added. According to the later rule the first letter should be mutilated, so as to drop its vowel, as the Sanskrit grammar requires, but this is not the case in Aśokan Brāhmī.¹ In Aśokan Brāhmī the following conjuncts are found:

(i) Having the second element *ya*:

kya, khya, gya, chya, tya, dhya, nya, bhya, mya, vya, sya, and hya.

In all these cases *ya* comes later, except in the Girnar R.E. where *vya* is spelt like *yva*. G. H. Ojha takes this as a mistake, and, judging from the practice in all other inscriptions, I think Ojha is right.

(ii) Having the second element *va*:

tva, dva, rva, śva, and hva.

In all these cases *va* comes later, and is added, sometimes with its vertical and at times without it, to the right, centre, or left.

(iii) Having the second element *ba*.

There is only one word, *dvādasa*, which is spelt sometimes with *va* and sometimes with *ba* in the Girnar R.E. Does this mean that the writer of the Girnar R.E. hailed from Bengal?

(iv) Having the second element *ra*:

kra, tra, dra, pra, vra, and sra.

This conjunct is very ingeniously formed. As the letter *ra* makes a serpentine vertical, in conjunction with another letter it replaces the straight vertical of that letter. When this conjunct is drawn, the letter *ra* is formed first and the other consonant follows. *Ra* is fully drawn and the second letter is added in abbreviated form. Normally the first component of a conjunct is placed above the second, but this is an exception. It is for this reason that the same sign is read as *sra* and *rsa*, or *vra* and *rva*. In the case of *dra* in Mysore inscriptions both the verticals are serpentine. On the evidence of this principle the reading of *dra* in Jaugad R.E. IV, line 3, by Hultzsch is not justified. Similarly, in the Bairat M.R.I., line 3,

¹ Cf. Bühler's remark on p. 15 of his *Indian Palaeography*, where he is mistaken.

the reading *rve* is not correct. We do not find the serpentine *ra* in these cases. The idea of *repha* had not yet developed. For the same reason the reading of *dhra* in Girnar R.E. I, line 12, and edict XIII, line 9, and Kalasi R.E. I, line 4, is mistaken. A knotty problem arises from the *bra*, read twice in Girnar R.E. IV, lines 2 and 6, simply because the left vertical of the rectangular *ba* has a slight notch in the middle. This notched vertical cannot be taken to be *ra*, firstly because it is exceptional (and actually doubtful in the second example), and secondly (which is fundamental) because it does not conform to the principle given above.

(v) Having the second element *sa*:

rsa. See my remark in (iv) above.

(vi) Having the second element *ṣa*:

ṣa is found in the Girnar R.E. III and IV. But *ṣa* is written first and then *sa* is cryptically added below it. This may be an exceptional case like that of *ra* (but see below, (vii)).

(vii) Having the second element *ta*:

sta, *pta* (but read as *tpa*).

In both these cases *ta* is an adjunct of the first letter which is fully drawn. The reading of *pta* as *tpa* in the word *ātṭa-pāsaṃḍa* is grammatically justified, but whether that was the actual pronunciation at the time is doubtful. If it was so, it has to be reckoned as an exception like *ṣa* in (vi). But more probably this was not the case, if we remember how the letters are reversed in popular language; e.g. *kāchū* for *chākū* in Punjābī. Hence even the *ṣa* of (vi) occurring at Girnar is a mistake, just as is *yva* at the same place.

(viii) Having the second element *pa*:

spa occurs at Girnar in the normal fashion.

(ix) Having the second element *ma*:

sma and *hma* are used according to the normal rule.

(x) Having the second element *ha*:

mha. In the word *baṃ-mh* (or *hm*) *a-na* two spellings are followed, the first at Girnar and the second at Kalasi (R.E. XI–XIV). The confusion in the spelling of this word survives in the modern Indian languages.

The medial vowels and the anusvāra

Bühler (pp. 14-15) seems to suggest that the addition of the medial vowels to the consonants is based on the same principle as that of the conjuncts, and for his proof he quotes the examples of the medial signs *o* and *u*, especially Pl. IIIa (Kalasi R.E. I-X), where the full form of *u* is subjoined. But this principle is not borne out by other examples. In fact the signs for the medial vowels are based on the three basic initial vowels: *a*, *i*, and *u*, and from these basic forms other signs are developed, just as in the case of the initial vowels, obviously by the Sanskrit grammarians.

(i) The medial vowel *a*, according to the rule of Sanskrit grammar, is present in all the consonants, and hence there is no separate sign for it.

(ii) The medial vowel *i* is marked primarily by adding a vertical stroke on the top right of the consonant (e.g. *ji* and *ṭi*), but in order to distinguish it from the vertical of the consonant it was usual to draw a short horizontal bar between the two verticals. In the case of the letters *ba*, *ṭha*, and *tha* the vowel is added to their middle right.

(iii) The medial vowel *u* is marked by a vertical (e.g. *nu*), horizontal (e.g. *ku* and *dhu*—the Kalasi example is an exception), or slanting (e.g. optional cases of *chu* and *khu*) stroke at the bottom right of the consonant.

(iv, v, and vi) The long vowels (i.e. *dirgha* in Sanskrit) are formed by an additional stroke in the same manner: two verticals on the top for *ī*, and two strokes downward (e.g. *sū* and *pū*) or horizontal (e.g. *dhū*) for long *ū*. The principle governing the long medial *ā* is the same as that of deriving the initial *ā* from the initial *a*, i.e. the addition of an horizontal stroke to the top right, but sometimes it is also placed in the middle right (e.g. *ṭhā*, *thā*, *bā*, and *mā* only in the Girnar R.E.).

(vii and viii) The medial vowels *e* and *o*, which, according to Sanskrit grammar, are the *guṇa* forms of *i* and *u*, are derived from them by the addition of a horizontal stroke to the top (or middle) left of the consonant, but this addition cancels the vertical stroke of *i* and transfers the horizontal stroke of *u* from bottom to the top right (Fig. 5. IX, X).

(ix and x) The vowels *ai* and *au* are again, according to Sanskrit grammar, the *ṛiddhi* of *e* and *o*, and hence as before an additional

stroke to the left is given (Fig. 5. IX, X). Actually the medial vowel *au* does not occur in Aśokan Brāhmī, but this principle is observed in the later inscriptions.

Throughout the formation of the medial vowels the hand of the Sanskrit grammarian is clearly observable. The signs follow the grammar, and not vice versa.

In some examples cursive forms of the medial vowels can be seen. In these cases the angular shape of *i* becomes rounded (*pi* in the Erragudi R.E.); *u* in *tu* slants upward (the Dhauli and Jaugad R.E.); *o* in *go* (the Rummindei M.P.I.) becomes one long stroke going across the top of the consonant. In the Girnar R.E. the strokes for *mā*, *me*, and *mo* are given in the middle instead of at the top of the consonant.

The *anusvāra* consists of a single dot placed on the right top, sometimes in the middle, and very rarely at the bottom right of the vowel or the consonant. In some cases where the medial *i* is found (e.g. *kiṃ*, Pl. IVa; *tiṃ*, Pl. IIIa) the *anusvāra* is placed at the angle of this vowel.

In the Jaugad S.E. there are three *svastikas* with curved arms and three *ma*'s engraved in the margin, one of the latter having a possible dot in the centre of its circle. It could be read as *maṃ*, and taken to stand for *maṅgala*, meaning auspicious. In the Rajula Mandagiri M.R.I. trisces occurs. As these symbols are definitely auspicious marks, the attribution of alphabetic meaning to one of them seems far fetched.

Punctuation in Aśokan Brāhmī

Punctuation is an exception rather than a general rule in Aśokan Brāhmī. In the pillar edicts especially and in others rarely we notice distinct spaces left between the words, but it should be noted that this was not so in all the cases. The idea of writing each word separately had developed but was not regularly followed. On the other hand, in the Kalasi R.E. (XI–XIV) the vertical line, i.e. the *daṇḍa*, in later scripts equivalent to the full-stop, appears generally along with the use of the cerebral *sha*. In this rock edict each edict has been separated from the other by placing a curve resembling the closing end of a parenthesis at the finish. In the Sahasram M.R.I. the *daṇḍa* regularly occurs at the end of the sentence. In the Maski M.R.I. it is again marked, but not at the proper place.

Conclusion

On the whole the inscriptions of Aśoka are well written. They were revised by the scribes after engraving. We notice the addition of missing letters here and there and also the erasing of mistaken repetitions. Aśokan Brāhmī shows two or three forms of the same letters, depending on the style of writing or engraving, but no one style can be attributed to any particular region. Sometimes two reversible varieties are noticed, e.g. \mathcal{D} or \mathcal{D} for *dha*; \mathcal{L} or \mathcal{L} for *o*; \mathcal{T} or \mathcal{T} for *no*; but, except for the second form of *o*, which is peculiar to the Dhauli and Jaugad R.E., no regional classification is possible.

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*List of Aśokan inscriptions*A. *Rock Edicts* (abbreviated as R.E.)

- (i) The Girnar R.E. in Junagarh, Bombay State.
- (ii) The Kalasi R.E. in Dehra Dun district, U.P.
- (iii) The Dhauli R.E. in Puri district, Orissa.
- (iv) The Jaugad R.E. in Ganjam district, Andhra.
- (v) The Bombay Sopara Fragment in Thana district, Bombay State. Hultzsch published only the fragment of R.E. VIII. R.E. IX is published in *Indian Archaeology, A Review*, 1956-7, Delhi, p. 73, pl. LXXXIXA.
- (vi) Erragudi R.E. in Bellary district, Madras. Only R.E. IV and VIII are published in *An. Rep. A.S.I.*, 1928-9, pl. LXI.

The R.E. in Kharoshthī

- (vii) The Shahbazgarhi R.E. in Peshawar district, West Pakistan.
- (viii) The Manshira R.E. in Hazara district, West Pakistan.

B. *The Pillar Edicts* (abbreviated as P.E.)

- (i) The Delhi Topra pillar.
- (ii) The Delhi Mirath pillar.
- (iii) The Lauriya Araraj and Lauriya Nandangarh pillars in Champaran district, Bihar.
- (iv) The Rampurva pillar in Champaran district, Bihar.
- (v) The Allahabad Kosam pillar.

C. *The Minor Pillar Inscriptions* (abbreviated as M.P.I.)

- (i) The Sanchi pillar in Bhopal, M.P.
- (ii) The Sarnath pillar in Banaras district, U.P.
- (iii) The Rummindei pillar in the Nepalese Terai.
- (iv) The Nigali Sagar pillar in the Nepalese Terai.

The following two inscriptions engraved on the Allahabad-Kosam pillar are included in this category:

- (v) The Queen's P.E.
- (vi) The Kauśāmbi P.E.

D. *The Minor Rock Inscriptions* (abbreviated as M.R.I.)

- (i) The Rupnath rock inscription in Jabalpur district, M.P.
- (ii) The Sahasram rock inscription in Shahabad district, Bihar.
- (iii) The Bairat rock inscription in Jaipur, Rajasthan.
- (iv) The Calcutta Bairat slab inscription or The Bhabhru Edict.
- (v) The Maski rock inscription in Raichur district, Mysore.
- (vi) Erragudi M.R.I. in Karnul district, Madras, published in *I.H.Q.*, 1933, pp. 114-20; and also *ibid.*, 1931, pp. 737-40.
- (vii) Rajula Mandagiri M.R.I. in Bellary district, Madras, published in *Epigraphia Indica*, xxxi, no. 28.
- (viii) Gujarra M.R.I., published in *Epigraphia Indica*, xxxi, no. 27.
- (ix-xi) The Brahmagiri, Siddhapur, and Jatinga Rameśvara M.R.I. in Chitaldrug district, Mysore.
- (xii) The Barabar Hill cave inscriptions (three in number) in Gaya district, Bihar.

THE PROVINCIAL BRĀHMĪ SCRIPTS TO THE MIDDLE OF THE FIRST CENTURY A.D.

Definition

AŚOKAN Brāhmī, described in the last chapter, had a unity of purpose which ultimately determined the style of writing. That script, in spite of minor differences, can be termed imperial. In contrast to the Aśokan inscriptions stand a great number of records, which, except for the donative inscriptions of Daśaratha, the grandson of Aśoka, show a variety of purpose and are entirely different in content and style from the Aśokan. Whether we take the administrative records, like the Mahasthan inscription or the Sohgaura plate, or study the royal rescripts, like the Nana-ghat or the Hathigumpha inscriptions, we are struck by the great change that marks them out from the Aśokan mode of expression. To these we must add the relic casket inscriptions found within the monumental stūpas which were to develop into great store-houses of stone sculptures bearing numerous gift records, and also the short epigraphs mentioning the excavation of caves found far away in the south—all due to the influence of the Buddhist (and very rarely Jaina) monks. Last but not the least is the writing found for the first time on coins, which no longer follow the old technique of punching, but are produced by the techniques of incuse stamping as in the Negama coins from Taxila, die-striking, and even casting. All these mark a great advance from the world of the Mauryas. The Mauryan standard no longer held good in this new context, but unfortunately the old palaeographers, for lack of better evidence, took Aśokan Brāhmī as the time-scale for dating all sorts of writing. This was evidently not valid for the vast subcontinent where the imperial hand was no longer the moving factor; and further, when we take into consideration the diffusion of technical knowledge, we have to bear in mind the question of time-lag from one region to another. It is not necessary to think of a universal

standard of writing for the whole of India and Pakistan, nor should we expect the evolution from Aśokan Brāhmī to take place in all the regions in the same manner. Aśokan Brāhmī, as we know today, was the creation of the royal scribes, but the inscriptions included in this chapter are of many kinds—royal, popular, and individualistic. They follow different standards reducible into various regions on the basis of technical achievement, and hence the title of this chapter—The Provincial Brāhmī Scripts. The middle of the first century A.D. completes the incorporation of a new technique of writing that came in with the intrusion of the Śakas into the subcontinent.

New approach to the problem

The shape of the Aśokan letters has usually been taken to be the basis for dating the inscriptions all over the subcontinent. While we hear of the Mauryan inscription from Mahasthan in the Bogra district, East Pakistan, we are also told, from purely palaeographical criteria, that the cave inscriptions from the south belong to the same period. In the determination of the age of an inscription the ratio of the length of the verticals to the breadth of the letters has been used most carelessly, without properly understanding its significance. Further important evidence given both by Bühler and Ojha is from the mistaken reading of the Maurya era in the Hathigumpha inscription, and accordingly it has been dated 'between B.C. 157 and 147'. Various synchronisms have been established on this false statement. Again Ojha alone speaks of the Mahāvīra era on the basis of the Barli inscription and dates it to the 84th year of this era. Dr. Jayaswal's correction makes no improvement, while the new reading given by Dr. D. C. Sircar is still hypothetical, though somehow he reaches the correct conclusion that the inscription should be dated to the first century B.C. His argument is not based on palaeography but on his supposed identification of Bhagavata mentioned in this inscription with King Bhāgavata in the Bhilsa record. Lastly palaeographers have used the word 'serif' very loosely without properly defining it, and have built up their chronological schemes on faintly recognizing it in some inscriptions.

As we have seen in the previous chapter,¹ no reliance can be placed on the length of the verticals. There is no gradual

¹ See above, p. 33.

reduction in the length from Aśokan Brāhmī onward. But there is a definite reduction of the verticals in later inscriptions, and the approximate equalization of length and breadth is seen for the first time in the Śaka records. It is not found in the coin legends of the Indo-Greek rulers Antialcidas and Pantaleon. What necessitated the change during the Śaka period? The answer is related to the change in Greek palaeography, as noted by several numismatists in the coinage. Without digressing into the question of Greek palaeography I must emphasize the well-known use of the square omicron on the Śaka and Parthian coins. Its adoption is not an isolated phenomenon. It had a fundamental effect on the style of writing, and it is this new tendency that simultaneously influenced the Brāhmī writing as seen in the Śaka coins and inscriptions. Even before this the metallic issues had begun to exert influence on the way of writing, and, as indicated by the coins of the Greek rulers, the angular feature was, no doubt, dictated by the Greek lettering as well as by the technique of die-cutting. But this was a slow and doubtful process, as is shown by the forms in the Besnagar inscription of Heliodorus. It became a fully established characteristic only in the Śaka records, and from this time onward dates one most important character of Indian scripts—the equalization of all the verticals. They assumed a new face producing an effect not dissimilar to the Greek lettering. Another great change was due to the introduction of a new writing tool. This was a broad or edged pen, the use of which is noticeable clearly in the drawing of the verticals, which begin with a thick top and gradually thin downward—an effect produced even today in the Punjab by the reed pen which is used by children for learning the Arabic alphabet, which they write on a wooden board. It is from the manner of holding the pen and its proper twisting as it moves that gradually thinning lines are produced. Some children, not fully conversant with this method, produce lines of equal thickness throughout, as we see in the Ghosundi inscription. This new tool gave a new face to the letters already recognized by the earlier palaeographers, e.g. the form of *ka*, which is vaguely described as 'dagger-shaped'. This top-head formation was not deliberately done. It was implied in this new process of writing itself. It also resulted in a beautifully curved flourish in the formation of the medial *i*. In some places this technique was properly known and used, but in backward regions it was only copied in

a crude fashion. In the latter case the head-formation appears like a dot or a sign, as in Nanaghat II and Arikamedu II (Pls. VI, VII). However, this head formation should not be confused with the 'serif', a term which I reserve for the deliberate marking of the heads of the letters, as we shall see in the next chapter, and which, no doubt, was a further development from the new style of writing introduced in this period. In the next stage this serif mark developed into a full headline, and ultimately we get the continuous top line of the later Indian scripts.

Classification

In order to verify the actual working of this new approach the inscriptions have been classified by regions. Four main regions stand out clearly: (1) Eastern India with the old centre in Magadha, and the new foci—one, south of the Ganges at Kauśāmbī, the influence of which went south-west to Bharhut and eastwards to Bodhgaya as far down as Hathigumpha in Orissa, and the other, north of the Ganges at Ayodhya. (2) North-west India with its centres at Taxila, Mathura, and a number of places in the Malwa plateau on the route leading from the north to the Deccan. (3) North-west Deccan, which is a continuation of the culture from the Malwa plateau. (4) South India, with which has been included Eastern Deccan. Amaravati and its neighbourhood saw a farther southward progress of the culture from Western Deccan, and from this centre writing trickled into the barbarous hill-caves of the extreme south. Sanskrit or Prakrit speakers from the north, as is shown from the Sanskrit legend on a potsherd from Arikamedu,¹ brought northern technical advancement into the slow-moving backward region of the south. For each of these regions a different standard was to be established according as the new technique of writing was variously practised.

Development of the alphabet

Before we go into the details of the regional writings, we must catalogue the new letters and conjuncts that were introduced in these inscriptions.²

In the initial vowels we have three additions to those used in Aśokan Brāhmī. The long *ī* is formed by adding a fourth dot to the three dots of the short *i*, each dot being placed at the four angles

¹ See below, p. 74.

² For Dravidian alphabets see below, p. 70.

of the quadrangle (Fig. 6. I). Ojha reads the broken sign δ in the Barli inscription as *vi* and argues that the curved addition over *va* should be taken for long *i*, but if he is correct this is a unique example, and in any case the letter is defective. Dr. D. C. Sircar



(I)	(i)	∴	→	(ī)	∴
(II)	(u)	L	→	(ū)	⊔
(III)	(e)	Δ	→	(ai)	⊔
(IV)	(Na)	⊥	→	(Nah)	⊥:
(V)	(Va)	Δ	→	(Vri)	Δ
(VI)	(Dha)	□	→	(Rdha)	⊔
(VII)	(Ta)	∪	→	(Tra)	∪
	(Ba)	□	→	(Bra)	□
	(Ka)	+	→	(Kra)	+
(VIII)	(Ṭa)	C	→	(Ṭa)	C Sanchi
	(Ṭa)	C	→	(Ṭa)	⌢ Mathura

FIG. 6

suggests that it is a compound of *dva*. But the form of *da* opening on the right is not seen in this period save for the exceptional script of Bhattiprolu. In its fragmentary nature it is difficult to suggest a definite reading. The long *ū* is formed by the same old principle, by adding a further horizontal stroke to the short *u* (Fig. 6. II). Similarly *ai* is formed by adding a stroke to the left of *e* (Fig. 6. III). Besides these, we also find the use of *visarga*. It is marked by adding two dots one above the other at the end of the letters (Fig. 6. IV). In the medial vowels we have the addition of *au*, formed in the fashion already anticipated in the last chapter,¹ and *ri* which is added as an inclined stroke to the bottom of the letter (Fig. 6. V).

The most important change took place in the formation of the conjuncts, especially in correcting the combinations formed with the consonant *ra*. In Aśokan Brāhmī there was no difference, whether *ra* was the initial or the second letter in the compound. In both the cases it was shown by giving a serpentine vertical to the straight verticals of the compounded letters. In these inscriptions

¹ See above, p. 46.

the initial *ra* is always shown by a small vertical added to the top of the other letter (Fig. 6. VI), while *ra*, when following, is added below the other consonant (Fig. 6. VII). All other compounds are formed as required by Sanskrit grammar. In the Ramgarh inscription the sign  has been read as *spha*, but such a combination, if correctly read, is unique. Elsewhere the second consonant is never added to the secondary loop of *sa* as in this case. The reading is doubtful. At Sanchi (inscription no. 3, Stūpa I) the sign  has been read as *hnu* in order to form the word *hnusā*, derivable from *snushā* (daughter-in-law). But inscriptions nos. 284 and 286 prove that the reading should be *nhu*. It is possible that *hnusā* was locally pronounced as *nhusā*.


There is also one addition to the consonants, found once at Sanchi and once at Mathura. This is the West Indian *la*. At Sanchi it occurs in the place-name *Vāḷivahana*¹ which has been spelt in other places as *Vāḍivahana*; and at Mathura it is used in the word *kālavāla*,² which Bühler takes for *kāla-vyāla*. It is formed from the letter *ṭa* (Fig. 6. VIII). This letter resembles *ḍha*, but it is distinct. It should not be confused with the North Indian *ḍa*, but should be taken as representing similar sounds occurring in the Dravidian languages and is to be regarded as the parent of the West Indian *la*, which survives in modern Marathi.

Eastern India

In this region there are five odd inscriptions which, being isolated in far-flung areas, have proved difficult for palaeographical study. The first is a series of three inscriptions from the Nagarjuni caves in Bihar, found not far from the Barabar caves where Aśokan inscriptions are engraved. These have been securely dated as they refer to Devānāṃpiya Dasaratha, the grandson of Aśoka. Palaeographically the inscriptions of Aśoka and Dasaratha are closely comparable. Both of them have short verticals. Some words, such as *kubhā* and *(a)bhisitena*, are virtually identical in the two series of inscriptions, but there are also some differences, e.g. in the forms of *a*, *ya*, and *va*. The Dasaratha inscriptions show a more cursive hand than the Aśokan. In the reading of the Dasaratha inscriptions there has been one blatant mistake. The dental *sa* has been taken

¹ J. Marshall and others, *Monuments of Sanchi*, Calcutta, 1940, pl. CXXXI, no. 187.

² *Epigraphia Indica*, ii, pl. opposite p. 397, no. 33.

for cerebral *sha*, but the error is proved by the addition of the medial *ū* to the main curve of *sa*, e.g.  (*sū*).

The next four inscriptions are markedly individualistic. The Piprahwa vase, found in the Basti district, U.P., has an inscription scratched on the steatite stone in a careless manner. As the inscription refers to the remains of the Buddha, it was originally dated to the pre-Mauryan period, but it has been brought down to the third century B.C. on a comparison with Aśokan Brāhmī. The style of writing is very poor, and there is nothing in it that speaks of the hand of the Aśokan scribes. We should not overlook the crude form of *ka* and *ta*, in which the vertical is unnecessarily lengthened. But here we do not find the later form of *dha* (i.e. the reverse of the Roman capital letter 'D'), and the medial vowels are applied as in Aśokan Brāhmī. We should mark also the angular form of *pa*, the long oval of *va*, and the reduction of the vertical in *la* and *na*, when the medial *i* is added, as we shall see also in the Barli inscription.¹ On these grounds the inscription may be confidently dated to the earlier half of the second century B.C.

In contrast to the above inscription the Sohagaura (Gorakhpur district) copper plate shows an advanced technique of casting, in which the letters are in high relief. Quite naturally the writing is very stylized and some of the letters have marked angular features. The form of *ma* is very exceptional, recalling that of the optional form at Bodhgaya and of the Mysore inscriptions of Aśoka (Pl. IVb), but this is unique. It can be safely assigned to the earlier half of the second century B.C.

We will take up the next two inscriptions together: one is from Mahasthan in the Bogra district, East Pakistan, and the other from Ramgarh in Chhattisgarh, M.P. In the latter place there are actually two inscriptions, chiselled on the rock surface, the first using *ra* and dental *sa*, and the second replacing *ra* by *la*, and dental *sa* by palatal *śa*. Except for this linguistic difference there is close similarity in the style of writing. The letter *ya* in the Ramgarh inscriptions is wedge-shaped (Fig. 5. Va), an angular development from the crescentic *ya* of Aśokan Brāhmī. Angularity is also marked in *pa*, *la*, *sa*, and *ha*, but this is of a different type, produced by the shorter vertical which is drawn at an angle. *Ra* has two forms, the straight vertical and the serpentine vertical; the last resembles the form seen in the Besnagar inscription of Heliodorus (Pl. Vb). But

¹ See below, p. 63.

bha, with notched vertical and the two separate horizontal lines for medial *o*, suggest a date not later than that of the Besnagar inscription, possibly the middle of the second century B.C. The Mahasthan inscription bears a close resemblance to the second epigraph from Ramgarh, except for the palatal *śa*, which is replaced here by dental *sa*. The form of this *sa* is very similar to that in the Dasaratha record. Both at Ramgarh (only in the second epigraph) and at Mahasthan the straight vertical (*daṇḍa*) is used as a punctuation mark. The main difference is in the forms of *ya* and *kha*. At Mahasthan alone *dha* keeps up the true shape of the Roman capital letter 'D', suggesting that its date is earlier than the time when the reverse variety became the common fashion. It may therefore be placed in the first half of the second century B.C.

The remaining inscriptions from this region (i.e. from Bharhut, Bodhgaya, Hathigumpha, Pabhosa, and Ayodhya) will be taken together (Pl. VI *a*, *b*). The Bharhut inscriptions fall into two groups: Bharhut I representing those from the railings, and Bharhut II from the gateway inscription mentioning the Śuṅgas. All these inscriptions have certain common characteristics, the small difference being mainly due to different hands and to the varied knowledge of the use of the new technique. In all these examples the left-hand curves of *a* and *ā* meet the verticals separately (as in Fig. 4. I), though optionally in Bharhut I, Pabhosa, and Ayodhya they meet at the same point. In all these cases the vertical of *ka* is lengthened. *Kha* has below its vertical a dot, a circle, or a triangle. *Ga* is round-topped; only exceptionally an angular form is seen in Bharhut I and at Bodhgaya. *Gha* has assumed a perfect angular form. The semicircle of *cha* here makes a rough quadrangle. *Chha* shows two distinct circles on either side of the lower end of the vertical, though in Bharhut I we have optionally a simple oval. *Ja* in the majority of cases is three-armed, but it also has the double curved variety, especially in Bharhut I. *Ta* has both flattened and round forms. *Da* has its top vertical shortened, while the lower is lengthened and makes a slight curve with the horizontal. Sometimes *na* has its lower horizontal bent. *Ta* usually has the curved form, but the angular form is seen optionally in Bharhut I and at Bodhgaya. *Da* is developing the rounded form but it still opens to the left. The angular *da* is also occasionally met. *Dha* has the reverse form of the Roman capital letter 'D'. The letters *pa*, *sa*, and *ha* have their lower curve changed into an angular form. *La*

has a peculiar round cursive form, but at Pabhosa, Ayodhya, and Hathigumpha it shows a new angular form known elsewhere only from the Śaka Kshatrapa inscriptions of Mathura. *Bha* has a straight vertical with its additional hook slightly broadened. *Ma* has its lower circle turned into a rough triangle, though the circle is retained in Bharhut I and optionally at Bodhgaya and Hathigumpha. *Ya* has both the crescentic and the double-curved varieties, both sometimes giving place to angular forms. The vertical of *ra* is generally straight, but occasionally serpentine. *Va* has its lower circle changed into a definite triangle, which is occasionally very rough.

There is also some change in the application of the medial vowels. In Bharhut I the medial *ā* in *jā* is optionally attached separately to the top. Except in Bharhut I, the medial *i* shows a tall flourish, developing into a beautiful curve in the Pabhosa and Ayodhya inscriptions. This form is derived from Śaka Kshatrapa records. The medial *u* in *pu*, *bu*, *su*, and *hu* is a downward stroke drawn in line with the right vertical; only in Bharhut I does the older practice persist. The medial *o* is a single horizontal line drawn on the top of the letters.

These common features are new developments. But Bharhut I shows a number of differences from Bharhut II and other records. Only here do older forms optionally persist, suggesting that it is somewhat earlier than the other inscriptions. The date of these latter inscriptions is fixed with more or less certainty by Pabhosa and Ayodhya examples, where we find the full use of the new pen and equalization of the verticals as in the Śaka Kshatrapa inscriptions of Mathura. In Hathigumpha, Bodhgaya, and Bharhut II these forms are copied. It does not seem that the writers knew the use of the new pen. This is also the reason why there is great variance in the length of the verticals in the same inscription. It must also be pointed out that if one analyses these inscriptions from the morphological point of view, he will find the disparity in the forms very confusing; for example the inscriptions other than the Hathigumpha found in the Khandagiri and Udaigiri caves, which are all contemporary, show marked differences in the forms. These other inscriptions show a preference for archaic forms which are optionally met with in the Hathigumpha inscription. This is bound to be the case in such a remote region as Orissa, where the new technical tradition could not get a foothold for a long time. It is

only by incidental letter forms that the palaeography of this region is related to those of other areas. This is an important point, but it is usually forgotten by Indian palaeographers, who are bewildered to find archaic forms surviving side by side with the newer types. All these inscriptions date from the same time as that when the Pabhosa and Ayodhya records derived the new technique from the Śaka Kshatrapa inscriptions of Mathura, i.e. in the first half of the first century A.D.¹ Hence Bharhut I may be dated in the later half of the first century B.C.



North-west India

Bühler vaguely hinted at a regional script for North-west India, in which he included the Kalasi R.E. of Aśoka and the coin legends of the Indo-Greek rulers. Though some of the letter-forms of Kalasi persisted in the later inscriptions, it is hard to maintain that a regional script existed as early as the time of Aśoka. The Aśokan P.E.s, now at Delhi, go against any such assumption. The regional script of North-west India started much later, when its letter-forms began to be influenced by the palaeography of the coins, especially of the foreign intruders. This change was natural, as much of the region was within the orbit of the foreign rulers, and we have good evidence for contact and mutual exchange.

Coins

We will begin our study with the palaeography of the coins (Pl. V a, b). Allan was the first numismatist to make a detailed study of the palaeography of the Brāhmī coin legends. His chronological scheme is taken for granted by others. But it is clear from a perusal of his *Catalogue of the Coins of Ancient India* that his study was influenced by factors other than palaeography. When no other evidence was available he fell back on the style of writing. No systematic attempt was made by him to analyse the letters. He dated some coins to the third century B.C. merely because their script resembled Aśokan Brāhmī. But, as we have seen, no reliance can be placed on such apparent resemblance. Similarly, Rapson,

¹ Much controversy has been raised over the phrase, *Naṁda-rāja-ti-vasa-sata*, occurring in the Hathigumpha inscription. The phrase is ambiguous. Even if we accept the opinion that it refers to 300 years after Nandarāja, not much reliance can be placed on this round number 300. The actual time may be slightly more or less.

while illustrating a plate of early Persian and Indian coins counter-marked with Brāhmī letters, assigned them to the fourth or fifth century B.C. on the evidence of the original coins, but coins by their very nature have a longer span of life than is usually believed. When was the countermarking with Brāhmī letters started? What is the meaning of the word 'countermarking' as applied to these coins? A close examination shows that the word here does not mean 'putting a new symbol on the coins', usually assumed to be the mark of the money-changers or the mint-masters. In these cases the letters are stamped on the old figures and thus the latter are partly defaced. This practice was possible only after the original coin-figures had ceased to be recognizable. Even if this assumption is not accepted we have to take into account all the coins illustrated by Rapson. The plate includes six of the debased silver coins of the rectangular variety which are also countermarked in the same fashion. The date of countermarking must be later than the time when these issues were current, as this practice is limited to a few coins and not to be seen at any later time. This fact makes the date considerably later than that given by Rapson. If we look to the palaeography, if it can be relied upon at all, the letter-forms are highly suggestive. We find here two forms of *ya*, the crescentic, in which the verticals are equalized, as , and the double-curved, in which the medial *o* is one horizontal line, as  (*yo*); while *pa* has its short vertical drawn at an angle, *va* and *kha* still retain the round forms; but *ga* has the rounded form of the later time. These letter-forms agree with those occurring in the coins of Agathocles and Pantaleon. Hence there cannot be much difference in time between the countermarking and these Indo-Greek issues. In these cases fine workmanship is a clear contrast to the poor lettering on the Negama coins of Taxila. But the Negama coins are not a later degeneration of the Greek issues, because the Greek coins imitate not only the square shape but also the incuse-stamping of the local issues. This was done only to maintain the continuity of the local currency, and proves the earlier date of the Negama coins, which must be placed in the earlier half of the second century B.C. The study of these coins makes it clear how poor was the local craftsmanship of letter-cutting for coins. It was the influence of Greek writing and Greek technicians that gave a new face to Indian Brāhmī. Similar poor workmanship is seen in the coins of Kāḍa, probably found in the Punjab. These coins, which are round as

well as square, are cast. In two of the pieces¹ the letter *sa* of the legend is reversed and shown as ʌ instead of ʂ . These coins may also be assigned to the later half of the second century B.C. Similar lettering is found in the earliest issues of the Yaudheyas, who continued their coinage still later, and then stopped to begin again after the Kushāṇas. Farther down in South-east Malwa we have another series of inscribed coins from Eran, the ancient Airikīṇa, spelt in the coins as 'Erakanya'. Three coins bearing this place-name have been published, one by Rapson² and two by Cunningham.³ In Rapson's coin the letters are written one below the other, while in Cunningham's coins they are written on the top margin from left to right. A fourth coin inscribed with the legend *dhama-pālasa* (published by Allan) has been the subject of hot discussion. This coin also shows an animal (a horse?—not described by Allan) just as the other coins. Here the legend is arranged on three sides of the coin, but all the letters are reversed and hence the writing appears to be from right to left. But it is clear from the coin that it was not done intentionally. Even the animal appears to be in reverse and is hence difficult to identify. A similar blunder of a reversed legend is seen in a coin of Śātakarṇi.⁴ The lettering in all these coins, which are either cast or die-struck, is of the same crude type. In no case can they be dated earlier than the issues of Kāḍa. The earliest issues of Mathura may also go back to this period, but the letters are very blurred and no definite conclusion can be reached.

The majority of the coins fall into series II and III. The second series includes some of the coins of the Yaudheyas, the coins of the Arjunāyanas, the earlier issues of Kauśāmbī, some of the coins of Mathura local rulers, and the coins of Kanauj, of Tripurī, and of Upagoda and Upātikya. In these cases the angularity of the letters is well established and round forms of *ga*, *śa*, and *ta* are usual. In the palaeography of these coin legends we clearly recognize how great was the influence of the Indo-Greek coinage. Their dates must lie in the first century B.C. The third series of the coins

¹ J. Allan, *A Catalogue of the Coins of Ancient India*, London, 1936, pl. XIX, nos. 17 and 19.

² *J.R.A.S.*, 1900, pl. VII, 7.

³ *A.S.R.*, x, pl. XXIV, nos. 16-17.

⁴ E. J. Rapson, *Catalogue of the Coins of the Andhra Dynasty, the Western Kshatrapas, the Traikūṭaka Dynasty and the 'Bodhi' Dynasty*, London, 1908, pl. I. 9.

is well defined at Mathura, where the local series is succeeded by the Śaka Kshatrapa issues. The Kshatrapa coins show two marked features: (i) equalization of the two verticals in letters such as *sa*, *sha*, *ha*, *pa*, *gha*, and *la*, and (ii) thickening of the top heads. The top flourish in medial *i* is also remarkable. These features are also noticeable in the coins of the Kuṇindas, the Pañchālas, the Vṛishṇis, and the Audumbaras, in the later issues of Kauśāmbī, and in the coins discovered at Almora and Ayodhya. These coins should be attributed to the first century A.D. Some of the still later coins of Kauśāmbī, like that of Dhanadeva, and of Ayodhya, must have been issued after the Kushāṇas.

Heliodorus inscription

Coin palaeography is rather suspicious, because firstly the legends are short, and secondly conservatism dies hard in coinage. However, its study has opened our eyes to the new technical knowledge that was gradually spreading in India. This conclusion is further supported by a very valuable pillar inscription from Besnagar (Pl. V) of the ambassador Heliodorus from the court of the Indo-Greek king, Antialcidas, ruling at Taxila, to King Bhāgabhadra in Malwa. This inscription provides an insight into the prevailing mode of writing and an inkling of the new tendency that was soon to affect this region. Remarkable forms, though optional, are the angular forms of *pa*, *va*, *sa*, *la*, and *ha*. The lower circle of *ma* faintly copies the triangular form. *Dha* is of the later regular variety. *Ra* has a new type of serpentine vertical, described by Bühler as the 'cork-screw' type, and also an optional curved form of the straight vertical. One variety of *ya* has exceptionally equalized verticals, as seen in the countermarked coins. *Bha* has a slanting vertical, and the medial vowels are attached in the older Aśokan fashion. The date of this inscription is towards the close of the second century B.C.

Barli, Ghosundi, and Bhilsa inscriptions

When we compare the Heliodorus inscription with three others (Pl. V) of this region—the Barli stone inscription from the Ajmer district, the Ghosundi inscription from the Chittorgadh district, and the Bhilsa inscription of King Bhāgavata—we notice a great difference. Not only do we find regularization of some new and old forms, but also a tendency to create the letters in a new style. Of

these the Barli inscription is the crudest example, with exaggerated verticals, except a few as in *li*, while the two others show better penmanship with the lines drawn equally thick throughout, the Bhilsa one showing equalization of the verticals in letters like *pa* and *sa*. Of the common features mention must be made of *bha*, which has a straight vertical, *ka* with a lengthened vertical, and *ma*, the lower circle of which greatly varies: in Barli it is a loop appended to the upper strokes which join together in a curve; in Ghosundi it is triangular, and in Bhilsa oval. The circle of *va* in Ghosundi and Bhilsa has become almost triangular. In Ghosundi alone *ra* maintains a degenerate form of 'cork-screw' type known from the Heliodorus inscription. The application of the medial vowels is also instructive. The medial *u* in Ghosundi follows the old practice, though it has come nearer to the right vertical, while in Bhilsa it is marked by prolonging the right vertical of *pa* downwards. On the other hand, the medial vowel *i* is given in the old fashion. Only in Barli it optionally has the tall flourish. These features show that they are much later than the inscription of Heliodorus. They cannot be placed earlier than the second half of the first century B.C. In order of sequence we should have first Ghosundi, then Bhilsa, and finally Barli.

Mathura

Bühler, while editing these inscriptions in *Epigraphia Indica*, vols. i and ii, distinguished the inscriptions of the Śaka Kshatrapas from others which he termed 'archaic', obviously meaning that these are earlier than the Kshatrapa inscriptions. This classification produced a confusion regarding the date of the Kankali Tila at Mathura, from where most of these inscriptions come. It is hardly justified. The difference between the so-called 'archaic' and the Kshatrapa inscriptions is due to the scribes, one being a commoner and the other a royal protégé. Consequently the Kshatrapa inscriptions are ornate, and show greater skill in the handling of the new pen. The other epigraphs lack this skill. But there is no difference in the forms of the letters. This is also true in the case of the Mora inscription, though older forms persisted here. From the point of view of chronology they fall in the same period, i.e. after the coming of the Kshatrapas to Mathura.

In the Kshatrapa inscriptions (Pl. VI *a*, *b*) the verticals are drawn in the new style, and even the curvature is affected by the

use of the new pen. The thickness varies with the twist of the pen, e.g. *a*, *ā*, *cha*, *chha*, *sa*, *ḍa*, *ta*, *bha*, *ya*, *la*, *ha*, and *ra*. Then we find the equalization of the verticals, except in *la* which has a tall flourish. Angularity is a marked feature in letters such as *kha*, *gha*, *ja*, *ṭa*, *pa*, *pha*, the lower circle of *ma*, *ya*, the lower circle of *va*, *sha*, *sa*, and *ha*. Both *ga* and *śa* develop a beautiful curve. *Chha* has optionally an ellipse, but more usually a double loop. The lower half of *ḍa* shows curvature, and the two strokes of *ta* are also joined in a curve. *Ra* has both the serpentine form and the straight vertical; the latter has its lower end bent to the left. The medial *i* has a tall curved flourish, and the medial *o* in the case of *mo* is attached optionally to the middle of the letter, as is known from the Girnar R.E. of Aśoka, while in *po* and *gho* two upward slanting strokes are attached to the left vertical—a practice which became common in the next period.

Sanchi

Sanchi (Pl. VI *a* and *b*) has given us a great wealth of material for palaeographical study. Bühler, R. P. Chanda, and N. G. Majumdar have studied in detail the palaeography of these inscriptions. Their method is based on the old assumptions, and though Chanda and Majumdar have made many corrections on stylistic grounds, their conclusions do not stand the test of the new approach. As my purpose is not to write a memoir on the Sanchi inscriptions, this study is confined to selected inscriptions in order to throw more light on palaeography. The inscriptions up to the first century A.D. are divisible into three series. The third series includes the inscriptions from Stūpa III (except the casket inscriptions), illustrated by Marshall in pl. CXXXVII, lower half, and those on the eastern, southern, and western gateways of Stūpa I, illustrated in Marshall, pl. CXXXIV. The inscription of 'Sātakaṇi' is included in this series. There are others scattered among the railing inscriptions of Stūpas I and II, but it is not possible here to catalogue all of them. There is no fundamental difference between this series and the Mathura Kshatrapa inscriptions. They may be safely dated to the first half of the first century A.D.

Series II includes the relic casket inscriptions of Stūpa II, illustrated by Marshall in pl. CXL, the railing inscriptions of Stūpa II, illustrated on pls. CXXXVI and CXXXVII, and those on the northern gateway of Stūpa I. The casket inscriptions are a class by

themselves and show unity of hand, while the railing inscriptions are very varied. The angularity is clearly marked in most of the letters. The casket inscriptions have reduced verticals. The medial *o* is a single horizontal line, while medial *u* in letters such as *pu*, *su*, and *hu* is given by prolonging the right vertical downwards. Though these inscriptions do not show the use of the new technique, they illustrate to a slight degree the influence of the new style of writing. Hence they may be safely dated in the second half of the first century B.C.

Series I includes the casket inscriptions of Stūpa III and most of the railing inscriptions of Stūpa I. Here we find some letters which resemble those in the Heliodorus inscription, but there are some features, such as the straight vertical of *bha* and the single horizontal line for medial *o*, which are so distinctive that they appear to occupy an intermediary position between the Heliodorus inscription and series II of Sanchi. Hence the inscriptions of series I may fairly be placed in the earlier half of the first century B.C.

Kangra Valley

At Kanhiara and Pathyar¹ small rock inscriptions in Brāhmī and Kharoshthī have been discovered. The Kanhiara Brāhmī inscription mentions the name of Kṛishṇayaśa, and the writing shows the angular feature of the Mathura Kshatrapa records. It may be dated in the first century A.D. The Pathyar inscription shows deliberate elongation of the verticals and the letters are also crudely drawn. Vogel places it in the third century B.C., but the accompanying Kharoshthī record indicates that the elongation is a freak of the writer. The inscription should be dated in the first century A.D.

North-west Deccan

The caves of North-west Deccan form a group by themselves. The inscriptions found in these caves have been analysed and assessed by Bühler and Burgess in the *Archaeological Survey of Western India*, vols. iv and v. Unfortunately the chart given by Burgess cannot be relied upon, as the drawings are marked rather by good draftsmanship than faithfulness to the original. The chronological scheme built up by these scholars is one of the main obstacles to the solution of many problems in the history of the Deccan. The scheme rests firstly on a comparison of the Nanaghat

¹ *Epigraphia Indica*, vii. 116-19.

inscriptions with Aśokan Brāhmī, and secondly on the established contemporaneity of the Āndhra rulers with the Western Kshatrapa kings. While the second is incontestable, as it is based on the content of the inscriptions, the first is not reliable, as has been already pointed out. The second synchronism is supported by palaeography. As will be shown in the next chapter, these later inscriptions are united by a common character ultimately derivable from the script of the Kushāṇa inscriptions. Before this last script came in use, the older scripts were followed in this region. These are shown in Pls. VI and VII. The records so far found, except for the Nanaghat inscription of Nayanikā, are short epigraphs, very few in number, pertaining to the Buddhist caves, and the descriptive labels on the sculptures at Nanaghat. These inscriptions fall into two groups. In the first group we have the main long inscription of Nanaghat (here called Nanaghat I), inscription no. 1 from Bhaja (Bhaja I), inscription nos. 1 and 2 from Nasik, and inscription nos. 1 and 2 from Ajanta (all references are to the illustrations published by Burgess). In this same group falls the newly discovered wooden ceiling inscription from Bhaja.¹ In the second group we have the minor Nanaghat inscriptions nos. 3-8, Bhaja nos. 3-6, Pitalkhora nos. 1-7, the Kondane inscription, the early inscriptions from Karle, and Ajanta painting no. 6; the remaining inscriptions in these and the other caves of the region are later in date.

As the Nanaghat I is the longest inscription, I shall put its analysis first. In general no definite rule has been observed for the length of the verticals. In some places they are equalized, and in others they vary in length. The use of the new tool is nowhere traceable, but some of the forms are very suspicious as they recall those of the new tradition. Angular forms of *pa*, *pha*, *ma*, *va*, *sa*, and *ha* are seen here and there. *Dha* is of the later regular type. *Bha* shows a straight vertical, and a new type in which the upper vertical is placed on the right side of the lower appendage. This will be hereafter called Deccani *bha*. *La* is drawn cursively in almost all the inscriptions of this time in the Deccan. One type of *ma* is a direct descendant of that occurring in the Girnar R.E. of Aśoka, and in the same fashion the medial *ā*, *e* and *o* are attached to the middle of this letter, though optionally we also find them at the top right or left. In other cases the medial *o* is one horizontal line,

¹ *Indian Archaeology, a review*, 1955-6, p. 29, pl. XLIVA.

while medial *u* in *pu*, *yu* and *su* is a prolongation downwards of the right vertical. The vertical of *ka* is lengthened; *kha* has three forms, with or without dot and with a circle; *ga* has both angular and rounded forms; *cha* is of three varieties, the semi-circular, the triangular, and the quadrangular; *chha* has an oval in place of the circle; *ta* has, besides the rounded appendage, a straight or curved stroke attached to the right of a long vertical. This second variety is the usual form in the Deccan and the south. *Da* has a rounded form. The letters in the Nasik inscriptions entirely agree with these. But Bhaja I is very crudely written. Its rounded *da* and triangular *va* suggest a later date. The newly discovered Bhaja inscription should not be dated to the second century B.C., as is done by Dr. B. Ch. Chhabra. The angularity of the letters is a marked feature, and the letters *bha* and *ma* especially point to a later date.

On the other hand, when we compare Nanaghat I with Nanaghat II, the similarity of the letters is so close that it is difficult to distinguish them. But if we take the six short inscriptions of Nanaghat II together, as we are compelled to do by the contents and the circumstances, we find some altogether new forms. The letters *cha*, *ña*, *ta*, *ya*, and the angular forms of *va* and *ha* could not have been produced without knowledge of the tradition of the Kshatrapa writing of Mathura. Though they do not show evidence of the use of the new pen, they must nevertheless be taken as imitative forms. Thus Nanaghat II is a mixed complex of groups I and II. In the inscriptions of group II the influence of the new style is quite obvious. It seems that the inscriptions of Bhaja II were written with the new pen. But in Ajanta we again notice a difference between nos. 1 and 2. However, there is no reason to divide them chronologically. Far different is the brush technique followed in painting no. 6, which also must be placed in the same period. These features strongly suggest that the inscriptions of group II should be dated to the first half of the first century A.D. What should be the date of group I? Here the main obstacle is the evidence from Nanaghat II, but this very evidence is also suggestive. Here we have what in archaeological terminology should be called an overlap of the older forms with the newer ones.

The study of coin epigraphy is further instructive. The earliest Āndhra coins have been found in the Malwa region and are described as of Malwa fabric.¹ They bear the words *Raño Siri*

¹ Rapson, op. cit., pp. xcii-xciv.

Sātakaṇiśa in characters which are hardly distinguishable from those of Nanaghat. But they (see especially Pl. I. 2) clearly show the head-formation recalling the new style of writing of the Mathura Kshatrapas. The coins, even of the Kolhapur fabric, from the time of Vāsishṭhīputra Viḷivāyakura onwards, all show this top head-formation, the flourish in the medial *i*, and angularity in the letters. This style of writing is due to influence from the Malwa region, where the latest Sanchi inscriptions are all in similar characters. Hence these coins date from the first half of the first century A.D. onwards. This new type of lettering continued in the coinage right down to the time of Vāsishṭhīputra Puḷumāvi and even later. But the epigraphy of the stone inscriptions reveals a different story. Here the influence is not so sudden. There is a gradual change from the Nanaghat inscriptions to those of Puḷumāvi. On account of the backwardness of the writing in the Nanaghat inscriptions the coins of Rājā Siri Sātakaṇi have been dated in the second century B.C., and an unnecessary gap has been assumed between his coins and those which follow. It is only for this reason that the Sātakaṇi of the Sanchi inscription¹ has not been properly identified. But this palaeographical anomaly must be understood on the basis of regional differences, and the apparent gap is filled up by the occurrence of occasional letters. If this is borne in mind, there does not seem to be any justification in differentiating between the Sātakaṇi of the Sanchi inscription, Rājā Siri Sātakaṇi of the coins of Malwa fabric, and Sātakaṇi of the Nanaghat inscriptions. The numismatic evidence completely closes up the gap between these inscriptions. Palaeography thus suggests that there is no chronological difference between group I and group II inscriptions of this region. They are to be placed in the first half of the first century A.D.

South India

South Indian palaeography received early attention with the publication of a monograph by Burnell in 1874. But the paucity of materials from the early period left many problems unsolved. The discovery of the inscriptions from the Bhattiprolu stūpa in the Kistna district and their masterly handling by Bühler raised for the first time the question of the southern alphabet and the script. Bühler had already maintained the existence of a Drāviḍi

¹ See above, p. 64.

script, including in it the character of the Peninsular inscriptions of Aśoka. Bhattiprolu gave him a new idea, that South India had a script of its own derived independently of the Aśokan. This statement was not borne out by the discovery of the 'early' inscriptions from Amaravati. The palaeographers did not pay heed to this discrepancy between the Bhattiprolu and the Amaravati scripts, probably because the Amaravati inscriptions are all in Prakrit and hence need not include characters suitable to the Dravidian languages. But a large number of cave inscriptions discovered in the districts of Madura and Tinneveli and in the former state of Pudukottai, which are all, as has been shown by Subrahmanya Ayyar, in Tamil, once again raised the question of the Drāviḍī script. Ayyar has pointed out the differences that are found between the Bhattiprolu and the cave inscriptions, but even now C. Sivaramamurti has not touched the important question of the origin of this script in his recent memoir on *Indian Epigraphy and South Indian Scripts*.

In the previous chapter we did not accept the division of Aśokan Brāhmī into northern and southern characters as propounded by Bühler. Aśokan Brāhmī is mainly imperial and it is hard to distinguish regional varieties. The evolution of the South Indian scripts can be traced only from the early inscriptions of Amaravati and Bhattiprolu, and from the cave records. There is one common denominator to all of them—they are Buddhistic in content. Hence the introduction of writing into the extreme south, as far as we know, must be ascribed to the activities of the Buddhist monks. It is hardly likely that these monks were isolated from the Buddhist order of North India. Another link is provided by the Prakrit used in most of these inscriptions. It is no wonder that there is a general similarity at this time between the scripts of South India and those of the north. The main differences arose only when an attempt was made to represent the local sounds in writing. Even these sounds, as we shall see, do not bring in altogether new shapes. Almost all the new letters are derivable from those of the existing script of the north. Hence there is no necessity for propounding an original Drāviḍī script different from Aśokan Brāhmī and tracing it to some ultimate source in Western Asia.

Bhattiprolu inscriptions

The most puzzling of these scripts is that used in the Bhattiprolu

inscriptions (Pl. VII *a, b*). Even here we find a difference between the inscription on the crystal and those on the three caskets. They agree in differing from Aśokan Brāhmī in having the curve of *da* open to the right, exactly the reverse of *da* in Aśokan Brāhmī, and in the northern characters of this period; otherwise the crystal script shows all regular forms. In the caskets we have a few new forms: *gha*, *ja* (optional), *bha*, *ma*, *la* and *sha*. One new letter, *la*, is added to spell South Indian names. All other letters are of the regular type except that they show regional variation. In the medial vowels the casket inscriptions have a short bar to express the short vowel *a* compounded with a consonant when it is not followed by *anusvāra*, and for long *ā* a farther downward slant from this bar. This is peculiar to the Bhattiprolu caskets and is not found elsewhere in South India, not even in the crystal inscription. As the casket inscriptions have a style of their own, it seems likely that they were written by one person, and the fact that a Dravidian sound *la* has been introduced suggests that the writer was a local Buddhist. If his peculiar fondness for expressing short *a* by a bar is set aside, it is not difficult to derive the new forms from those known in Northern Brāhmī. Most of them appear to be the reverse of the regular forms. Fig. 7. I–IV shows how the Bhattiprolu forms of *bha*, *ma*, *la* and *sha* are derived from the regular forms. In *ja* we find the middle bar omitted when short *a* is not to be shown, and it appears only with two horizontals attached to either end of a vertical. The only letter which is strangely derived is *gha*, where the second loop is added to the long vertical at the top (Fig. 7. V). The new letter *la* can be derived from *la* (Fig. 7. VI). These changes must be attributed to the man who wrote these inscriptions, as they are found nowhere else. I would regard them as mistakes on his part rather than accept them as a new script.

The cave inscriptions also introduce new letters to express Tamil sounds. The most easily recognizable of these is *na*, which is derived from the dental *na* (Fig. 7. VII). The second is *la*, derived from the regular form of *la*, thus proving that the reverse form of Bhattiprolu was a mistake (Fig. 7. VIII). We have another *ra*, derived from the form of Sanchi *la*, ultimately originating from *ta*, as already shown (Fig. 7. IX). We have to distinguish this from Sanchi *la* and from that occurring later in Western India, even though these forms are related to each other. Phonetically they are distinct. Sivaramamurti was mistaken (see his fig. 64) in linking *la*

of the north and west with *la* of the south. One more new letter that appears in the cave inscriptions is *la*, which form Subrahmanya Ayyar derives from the double-looped *ja*. But it is more probably derived from the Sanchi *la* by the addition of a loop (Fig. 7. X). Thus this palaeographical study confirms the opinion propounded long ago by Caldwell¹ that the source of the southern alphabet is the North Indian character.

	Regular		Bhattiprolu
(I)	(Bha) 𑀧	→	𑀧 → 𑀧
(II)	(Ma) 𑀕	→	𑀕 → 𑀕
(III)	(La) 𑀭	→	𑀭 → 𑀭
(IV)	(Sha) 𑀲	→	𑀲 → 𑀲
(V)	(Cha) 𑀺	→	𑀺
(VI)	(La) 𑀭	→	𑀭 (Reverse) → (La) 𑀭
(VII)	(Na) 𑀣	→	(Na) 𑀣
(VIII)	(La) 𑀭	→	(La) 𑀭
(IX)	(La) 𑀭	(Sanchi) →	(Ra) 𑀲
(X)	(La) 𑀭	(Sanchi) →	(La) 𑀭

FIG. 7

After discussing the source of the South Indian scripts we have now to trace the course of their development. In this we shall not look to the evolution from Aśokan Brāhmī for comparable material. One task will be rather to trace a new standard for this region.

The inscriptions from Bhattiprolu are regarded as the earliest in date, and Bühler has assigned them to the second century B.C. at the latest. This date is not borne out by critical analysis. I shall describe here only the relevant letters. The vertical of *ka* is lengthened. *Ga* is both angular and rounded. *Cha* has one peculiar triangular and another quadrangular loop. The circle of *chha* has changed into a rough oval. *Da* has also a rounded form. *Dha* is of the regular type, such as became common in the later period. *Bha* has a straight vertical. *Ma* copies in reverse a form from the Girnar

¹ *A Comparative Grammar of the Dravidian Languages*, London, 1856, p. 93

R.E. of Aśoka, but this form is also present in Nanaghat I and in the Amaravati inscriptions. The *ma* on the crystal is crudely drawn with a single stroke. *Ra* is either a straight vertical or has a curve at the lower end. *La* has the cursive round form of the later period. *Va* has a long loop recalling the triangular form. The medial *o* is a single straight line, and the medial *u* in *bu* is added by prolonging the right vertical downwards. These features suggest a connexion with the development that was going on in North-west Deccan, and in no case can the Bhattiprolu inscriptions be dated earlier than those of Nanaghat. When we recall that all these Buddhists were in close contact, we may place the Bhattiprolu inscriptions in the first century A.D. This conclusion is strengthened when we turn to the main groups of the southern inscriptions known from Amaravati and the caves of South India.

The early inscriptions from Amaravati, as published by R. P. Chanda,¹ confirm my dating of those of Bhattiprolu. Here we find writing more closely related to the group II inscriptions from Western Deccan. In Amaravati the form of *bha* is varied. Besides the straight vertical form, we find examples which retain the slanting vertical. *Ma* has its lower circle changed into a triangle. No definite rule is observed in the length of the verticals. Angularity is noticeable in forms such as *sa*, *pa* and *ha*. *Va* has a long loop recalling the triangular form. *Ra* has a straight vertical, and *cha* has its lower circle changed into a quadrangle. The form of *ka* has its vertical longer above the horizontal than below it. Hence these Amaravati inscriptions can be safely placed in the earlier half of the first century A.D. They are succeeded directly by inscriptions containing forms which are traceable from the Kushāṇa inscriptions. It must, however, be pointed out that there is a marked difference between the forms of letters in North-west Deccan at this time and those of Amaravati, for the latter seem some fifty years older than the former. This discrepancy is due to the time-lag in the adoption of new styles. The same difference is noticeable in comparing inscriptions of West Deccan with those of Orissa. As I have explained before, these facts have to be accepted.

When we leave Amaravati and turn to the cave inscriptions, we find further confirmation of this theory of the time-lag. These inscriptions are divisible into three groups: (1) those found in Madura and Tinneveli districts, (2) that found at Sittanavasal in

¹ *Epigraphia Indica*, xv. 264-6, nos. 1-20.

the former Puddukottai State (Pl. VII), and (3) that found at Guntapalli (not illustrated here). The last is a very late record, as it shows deliberate head-formation and also slight curvature of the lower verticals which, as will be shown in the next chapter, are features which did not develop before the second century A.D. The inscription from Sittanavasal is unique in South India in that it copies certain northern letters which are not known even in Amaravati. The most remarkable is the form of *la*, which occurs in the Śaka Kshatrapa records of Mathura. The forms of *na*, *pa*, and *ya* are also remarkable. Hence this inscription cannot be dated earlier than the first half of the first century A.D. But the form of *i*, with a dot on either side of a vertical, occurring in this inscription is not seen at this time outside South India. This sign is used for long *ī* in North and West India in the next and subsequent periods. Could this form have been introduced from the south into the north? The development of this new form from the three dots of the short *i* is possible in South India, as it is used here both for short and long *ī*.

The other cave inscriptions are cruder in workmanship, but some of the forms are related to the Sittanavasal inscriptions. The comparable letters are *va*, *la*, *ma*, *ra*, *la*, *na*, *ta*, *cha* and *ka*. *Ma* is of a new form in these inscriptions, resembling a U with a cross-bar in the middle. This will be called hereafter the Dravidian *ma*. This form has been found in Sanchi.¹ These inscriptions are not far removed in time from the Sittanavasal inscription, though they are cruder in workmanship, and their date must fall in the first half of the first century A.D.

My dating of these cave inscriptions receives confirmation from the evidence supplied by the excavated materials at Arikamedu (Pl. VII. 11, 12). There some inscribed potsherds have been found in datable strata. Even if we do not rely on the evidence of the stratification, as dated by Wheeler, these inscriptions may also be dated on palaeographical grounds. They fall into two groups. The first, which we will call Arikamedu I, has legends in Tamil, and the script, though crudely scratched on the pots, agrees with that seen in the caves of the Madura and Tinneveli districts. In Arikamedu II only one potsherd is illustrated, which reads *yakhami-trasya*, and not *yakhamitasa*, as is given in the published report. The importance of this inscription lies not only in the use of a

¹ Marshall and others, *Monuments of Sanchi*, pl. CXXXIII. 354.

northern language but also in the script, which is quite different from that of the other potsherds. Obviously the difference is due to the persons who made the pots—the single piece of Arikamedu II was inscribed by a potter who knew some Sanskrit, if only very poorly, and who probably came from the north, while the others were made and inscribed by the local southerners. This probably accounts for the marked difference in the scripts followed. The southerner follows the crude style of the cave inscriptions, while the northerner copies forms that can be traced from the records of the Mathura Kshatrapas (note especially the letters *kha*, *ma* and *ya*). Here we get the meeting point of the northern and southern scripts in the first century A.D., dated both by the palaeography as well as by the other materials produced by the archaeologists. This evidence sets at rest all controversies regarding the age of the cave inscriptions. They cannot be placed earlier than the beginning of the Christian era.

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North-west Deccan

1. *Archaeological Survey of Western India*, no. v. Bühler's edition of the following inscriptions: (i) Nanaghat inscription of Queen Nayanikā. (ii) Minor inscriptions from Nanaghat, nos. 3-8.
2. *Archaeological Survey of Western India*, no. iv. Burgess's edition of the following inscriptions: (i) Bhaja nos. 1-6. (ii) Kondane inscription. (iii) Pitalkhora nos. 1-7. (iv) Nasik nos. 1-2. (v) Ajanta nos. 1-2. (vi) Ajanta Painting no. 6.
3. GHOSH, A., *Indian Archaeology, A Review*, 1955-6, p. 29, pl. XLIVA, for a new Bhaja inscription on wooden ceiling.

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1. BURNELL, A. C., *Elements of South Indian Palaeography*, 2nd ed., London, 1878.
2. SIVARAMAMURTI, C., 'Indian Epigraphy and South Indian Scripts', *Bulletin of the Madras Government Museum*, Madras, 1952.
3. BURGESS, J., *Archaeological Survey of Southern India*, I (only inscription no. 4 from Amaravati).
4. CHANDA, R. P., 'Some Unpublished Amaravati Inscriptions', *Epigraphia Indica*, xv. (only nos. 1-20).
5. *Madras Reports on Epigraphy*, 1912, plate facing p. 57. The following inscriptions are studied: those from (i) Karungalakudi, (ii) Kongarpuliyangulam, (iii) Tirupparangunram, (iv) Anaimalai, and (v) Mettupatti.
6. *Madras Epigraphy Report*, 1915, pl. 1 facing p. 86, inscription no. (a) from Sittannavasal in Puddukottai.

7. *Madras Epigraphy Report*, 1917, p. 5, inscription from Guntapalli stūpa in Kistna district.
8. *Madras Epigraphy Report*, 1918, pl. 1 facing p. 7. The inscriptions from the following places are studied: (i) Mettuppatti, (ii) Varichchiyur, (iii) Alagarmalai, (iv) Arittapatti, and (v) Kunnakkudi.
9. SUBRAHMANYA AYYAR, K. V., 'The Earliest Monuments of the Pandya Country and their Inscriptions', *Proceedings and Transactions of the Third Oriental Conference*, Madras, 1924, pp. 275-300.
10. BÜHLER, G., 'The Bhattiprolu Inscriptions', *Epigraphia Indica*, ii. 323-9.
11. Arikamedu inscribed potsherds in the excavation report on Arikamedu in *Ancient India*, no. 2, Delhi, 1946.

BRĀHMĪ WRITING STYLES BETWEEN THE FIRST AND THE FOURTH CENTURIES A.D.

Definition

BRĀHMĪ was marked by a definite 'pen' style in the previous period, with the main body of the letters equal in length and the verticals drawn with tapering thickness. The medial vowels and the long verticals (e.g. in letters such as *a*, *ka*, *ra* and *la*) received no particular attention, except that the medial *i* sometimes had a tall flourish and *ra* had its lower tip curved. This 'pen' style was much elaborated in this period. The elaboration is the result of three notable tendencies in writing: (i) a predilection for cursive forms dictated by the swift flow of the hand in writing, e.g. in the forms of *na*, *ma*, *la*, *sa* and *ha* in the Kosam region (Pl. VIII *a*, *b*); (ii) a desire for an ornate style, as is seen especially in the Bijayagadh inscriptions (Pl. IX *a*, *b*); and (iii) fondness for symmetry and proportion noticeable in the inscriptions from Jogey-yapeta and Nagarjunikonda (Pl. IX. 12). While the first tendency deformed the letters and hence paved the way for new shapes, the second and the third added ornamental curves, triangles and rectangles, and thus created different styles. The different ways of writing resulted in the gradual introduction of newer forms. The writer, by his personal mannerisms, prepared the way for a particular style of writing, which led to the growth of a definite school in due course. But for the present the style was fluid. Its ornamental additions were essentially superfluous, and there was no fundamental difference in the main body of the letters. Brāhmī maintained its unity throughout the subcontinent. This unity was the result, not of any political integration as in the time of Aśoka, but of those socio-religious forces which were let loose after the invasion of the Kushāṇas and which gathered round different nuclei in different regions by the end of this period to develop into local cultures. From the point of view of palaeography this led to

regional scripts, the beginning of which is traceable from the fifth century A.D. onwards, with slight variations of date in some regions. These grew out of the various styles of writing that prevailed in this period. It is to the definition of these styles that the present chapter is devoted.

New approach

The materials have in the past been studied from the point of view of the ruling dynasties, and various styles of writing have been labelled Kushāṇa, Western Kshatrapa, Śātavāhana, or Gupta. This approach is understandable, as the materials available for study have been mainly the inscriptions of kings belonging to these dynasties. But with the varied inscriptions at our disposal this approach is no longer necessary, as it limits our vision and leaves many important varieties unexplained. What is essential is to discover the different styles of writing as revealed in the inscriptions, to locate them in space and time, and to follow their movements. On this basis the inscriptions of a given region will be classified and analysed, and the materials obtained will be compared with those of the other regions in order to discover interconnexion.

Recently an attempt has been made by Dr. Van Lohuizen De Leeuw¹ to study the development of the 'Kushāṇa' script at Mathura on the basis of a few letters. She takes the forms of the vowel *u*, the medial *u* in *ku*, the subscript *ya*, and the consonant *ya*, and tries to arrange the inscriptions in chronological order, as the base of *u* becomes more and more crooked, or as the length of the subscript *ya* increases, or as the middle vertical of *ya* becomes inclined and its left vertical has or has not a loop. This study of a gradual development is not a new method. It is similar to the old idea of the gradual reduction of the verticals from Aśokan Brāhmī onwards—a conception which was based on misunderstanding and hence was rejected in the last chapter. Similarly, Dr. Lohuizen's assumption fails miserably when applied to a wider horizon and tested by comparative materials from the other regions. This wider perspective demands a new approach to the problem.

Classification

It is not possible to speak of a uniform Kushāṇa style as applicable throughout their empire during their rule. The inscriptions

¹ *The 'Scythian' Period*, Leiden, 1949.

from Mathura, as analysed on Pl. VIII *a, b*, reveal a variety of styles, and when these are compared with a group of Kanishka inscriptions from Kosam, Sahet-Mahet and Sarnath, the difference is clearly marked. The Kanishka inscription of the year 14 (Pl. VIII. 4) and the Huvishka inscription of the year 33 (Pl. VIII. 6) have features of their own and can be explained only when they are placed side by side with the inscriptions from the Kosam region. The 'early group'¹ of the inscriptions from Mathura has a greater affinity with the early inscriptions of the Western Kshatrapas than with the Kushāṇa inscriptions from Mathura. The style is further changed in the records of the later Western Kshatrapas, when it received new stimulus from Mathura. This style of the Western Kshatrapas is characteristic of Gujarat and Western Malwa. In Eastern Malwa another ornamental style developed, which reached its highest evolution in the Bijayagadh inscriptions. The two stages of the Western Kshatrapa writing are also marked on the Śātavāhana records of Western Deccan, where a new ornamental Deccani style takes shape. It is this style which influences the characters of the south. On the one hand, its development is traceable through the Banavasi and Maḷavalli inscriptions to those of the Kadambas, and, on the other, through the inscriptions of Amara-vati it evolves into the highly ornate style of Nagarjunikonda and Jogeyyapeta. In Madhya Pradesh, which was a backward region, odd inscriptions, showing influences from both the Gangetic Valley and the Deccan, have been found. Lastly, the early Gupta inscriptions are reducible into regions, as they continued the earlier styles in the fourth century A.D.

Main features










There was a fundamental break from the earlier practice as regards the emphasis laid on the different limbs of the letters. The new changes resolve themselves into four main groups:

(1) The first relates to the shaping of the head-mark (Fig. 8. I-III). In the inscriptions of the Mathura Kshatrapas the verticals by their tapering thickness received a new shape, with the head growing in prominence (Fig. 8. Ia). This feature continued for some time in the Kushāṇa inscriptions, but survived longer in the inscriptions of the Western Kshatrapas and the Śātavāhanas. Very soon it degenerated into a short head-mark, from which the

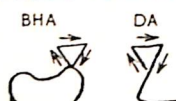
¹ For the list see Bibliography at the end of the chapter, p. 104.

verticals depend (Fig. 8. Ib). It helped to keep the letters in line and was also useful in maintaining their equal breadth. This head-mark was referred to by earlier palaeographers as the 'serif'. It is present in almost all the inscriptions of this period, especially in North India. But very soon it assumes newer shapes. The evolution proceeds on two different lines, as shown in Fig. 8. I, II. The simple












EVOLUTION OF THE HEAD-MARK

(I) (a)  (b)  (c)  (d)  (e) (II) (a)  (b)  (c)  (d) 



(III) MOHENJODARO POTSDHERD



(IV) KUSHĀNA MEDIAL VOWELS


KĀ	KI	KĪ	KU	PŪ	GRI	VE	VAI	BO	PAU	NAM
										

(V) EARLY GUPTA

SHĀ	HKA	HPA
		

(VI) WESTERN KSHATRAPA

NAU



(VII) OTHER NEW SIGNS




DDHAM	ŌGA	ŌGHA
		

FIG. 8

head-mark shown by a single line, as we see in the Mathura inscriptions, in due course is thickened (Fig. 8. Ic) by the habit of repeating the lines two or three times. This thick head-mark is the characteristic of the Eastern Malwa style. This tendency further results in turning the thick line into a square head-mark (Fig. 8. Id), as is seen in the Malwa group of the early Gupta inscriptions. In these cases the square is solid, but later on we meet with a hollow square head-mark (Fig. 8. Ie), in the inscriptions of the Vākātakas and others. This type was called 'box-headed' by the old palaeo-

graphers.¹ In the second variety the head-mark develops a notch in the middle (Fig. 8. IIb), giving place to an angular line which ultimately results in a triangular head-mark (Fig. 8. IIc), as is seen in the inscriptions from Bijayagadh and Nagarjunikonda. This is achieved by a three-way turning of the pen instead of repeating on the same line for thickness. This is easily understood from an inscribed pottery fragment discovered in the (Kushāṇa) stūpa at Mohenjodaro² (Fig. 8. III), which makes the process clear. Here we have a hollow triangular head-mark. Other good examples are the Shorkot inscription of the year 83³ and the Majhgawan plates of Mahārāja Hastin.⁴ This style was called 'nail-headed' by the old palaeographers.⁵

The terminology adopted in this book is given below:

- (a) Line head-mark (Fig. 8. Ib).
- (b) Block head-mark (Fig. 8. Ic).
- (c) Notched head-mark (Fig. 8. IIb).
- (d) Solid square head-mark (Fig. 8. Id).
- (e) Hollow square head-mark (Fig. 8. Ie).
- (f) Solid triangular head-mark (Fig. 8. IIc).
- (g) Hollow triangular head-mark (Fig. 8. IId).

(2) The second change is noticeable in the style of the medial vowels. The new system is shown in Fig. 8. IV. The medial *ā* is now a slanting vertical. The medial *i* and *ī* assume rounded forms of several ornamental varieties (see also Fig. 10. IV). The medial *u* bends its base in a greater or lesser degree. The second stroke of the medial *ū* is added at an incline to the left of the first stroke. The medial *ri* also has a curved form. The strokes of the medial *e*, *ai*, *o*, and *au* bend upward. These changes are generally adopted in this period in North India, but the older system survives in the Deccan inscriptions.

There are other changes affecting local varieties. In the Mathura inscriptions of the Kushāṇa period, and as an influence in a few others, the *anusvāra* is shown as a short line in place of the dot. In the inscriptions of the later Western Kshatrapas the medial *au* has its double stroke on the right joined in a curve (Fig. 8. VI). In the early Gupta inscriptions the medial *ā* is shown by a long

¹ J. F. Fleet, *C.I.I.*, iii. 19.

² J. Marshall, *Mohenjodaro and the Indus Civilisation*, iii, pl. XC.

³ *Epigraphia Indica*, xvi. 15.

⁴ Fleet, *op. cit.*, pl. XIV.

⁵ *Ibid.*, p. 19.

horizontal line with an additional tick downwards (Fig. 8. V), a practice that became common in the subsequent period.

(3) The third change is the result of the influence of cursive hands. In these cases the letters assume new forms. They are shown in Fig. 9. The Deccani *ta*, which had a hooked stroke attached to

EVOLUTION OF CURSIVE FORMS

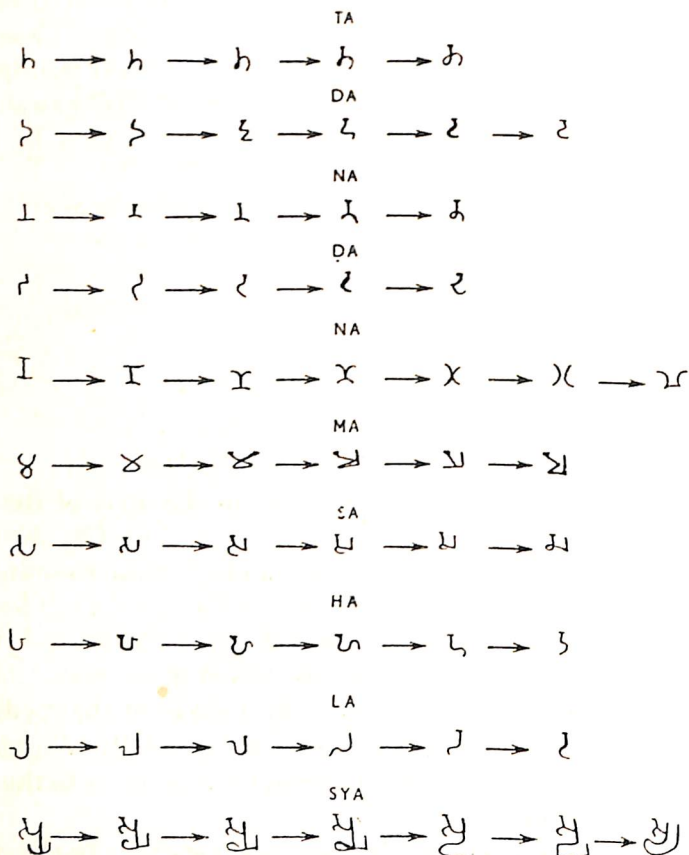



FIG. 9

the right of the vertical, first bends its vertical, and later as the hook is drawn in one and the same action, a loop develops at the junction of the vertical and the hook. The original round-backed *da*, which had its mouth open to the left, first has its upper and lower appendages inclined, and then, after the head-mark becomes the general fashion, the lower appendage vanishes. The cursive form again receives a rounded back, but with the mouth open to

the right. The letter *na* first bends its base, and, finally, a loop develops at the junction of the vertical and the base. The original stepped *da* first slants its middle bar, then curves its angles with the elongation of the lower stroke, and finally develops a round-backed form in the Deccan. In the letter *ṇa* the upper stroke plays a predominant role, though the base also bends as in the case of *na*, and rarely develops a loop (not shown in the figure). The upper stroke bifurcates on either side of the vertical and gradually tears asunder the vertical, leading to the shape of . The two curves separate farther and stand on the original base. This is the open-mouthed *ṇa*. The triangular base of the letter *ma* is changed. First it flattens out and then the triangle is placed on one side. In one case the base of the triangle merges with the longer arm, producing a tailed *ma*. In the other case the apex of the triangle opens and we get an open-mouthed *ma*. In the case of *sa* the left hook becomes a part of the left stroke, and when they are drawn in a single action with the remaining limbs the looped *sa* is produced. Both the letters *la* and *ha* play upon their originally insignificant tick, which gradually becomes rounded and ultimately finishes off the original bar to produce the hooked *la* and *ha*. Another significant change is seen in the subscript *ya*, which in the Mathura inscriptions develops a looped variety until finally this loop absorbs the base and the remaining verticals, resulting in the hooked variety of the subscript *ya*.

(4) The fourth change is the result of fondness for flourishes. There are several ways in which this is expressed. They are shown in Fig. 10. IV–VI. In the first place the medial vowels develop curls, as shown in Fig. 10. IV. In the second place the long verticals bend either at the lower end or at the upper (Fig. 10. V). In the third place some of the letters become notched in the middle, as shown in Fig. 10. VI. Finally, the upper and lower flourishes balance on either side of the main letters in the centre, producing a calligraphic effect, as in the case of the inscriptions from Nagarjunikonda and Jogeyyapeta.

New signs

In this period for the first time we meet with the initial *ṛi*, expressed by a simple cross in the Andhau inscription of Rudradāman. The *m halanta* (vowelless) is met in the word *siddham* in some cases, and is expressed by placing a short *ma* at the lower right-hand side of the compound *ddha* (Fig. 8. VII). The consonant *ṇa*

is met with in combination with *ga* and *gha*, and is expressed by a sign similar to the Roman capital letter 'E' minus the middle bar (Fig. 8. VII). We also meet with the use of *jihvāmūliya* (the *visarga* in combination with *ka*) and *upadhmānīya* (the *visarga* in combination with *pa*). The first is expressed by a double-axe sign placed vertically on the letter *ka*, and the second by a double loop placed horizontally over *pa* (Fig. 8. V). A new form of long *ī* with a dot on either side of a central vertical is also met with. This form is earlier seen in the cave inscriptions¹ of the south. The use of the letter *la* in the Allahabad pillar inscription of Samudra Gupta is not due to influence from the south, as Fleet² supposed. It is well established in the inscriptions at Mathura and Sanchi. In the Allahabad pillar inscription of Samudra Gupta we also find the verses numbered.

The Indus zone

The Kharoshthī script was generally used in this region, and Brāhmī writing is found only exceptionally.³ Some inscribed fragmentary potsherds were discovered in the excavation of the Kuśhāṇa stūpa at Mohenjodaro.⁴ They are all written with ink. One piece has letters with the hollow triangular head-mark already described. The letters on the other sherds have only a line head-mark. The *anusvāra* is expressed by a short line and the letter *da* has its mouth open to the right. The letter *ha* shows a loop in place of the tick and *dha* has an almost triangular form with the apex downward. The end verticals of the letter *ya* are curled and *bha* is of the broad type with its horizontal notched. The base of *ma* has both oval and triangular forms. It is difficult to speak of a local style on the basis of these fragments. They show obvious connexion with the Western Malwa style. They can be dated in the second century A.D.

Of much later date are the inscribed pottery fragments from Tor Dheri in the Loralai district of North Baluchistan.⁵ These are also written with ink. Here the medial vowels *i* and *ī* have a curly flourish, but medial *ā* optionally has the later form used in the Gupta records. The triangular base of *ma* has an open mouth. On

¹ See above, p. 73.

³ See below, p. 251.

² Op. cit., p. 4.

⁴ Marshall, op. cit., pl. XC.

⁵ A. Stein, 'An Archaeological Tour in Waziristan and Northern Baluchistan', in *Mem. A.S.I.*, no. 37, p. 93, pls. XVII and XIX.

palaeographical grounds the inscriptions should be dated in the close of the fourth century A.D.

Mathura styles

The first series of the inscriptions is included in the 'Early Group' (Pl. VIII. 1). In these cases the verticals show the tapering thickness, familiar to us from the inscriptions of the Mathura Śaka Kshatrapas. The medial vowels generally follow the old style, except that medial *i* does not show the tall flourish, but the *anusvāra* is marked by a short line. The development is seen in the form of the initial *a* (Fig. 10. Ia). Here prominence is given to the upper left curve while the lower one has an additional tick. The triangular bases of *kha*, *ma* and *va* receive greater attention. *Na* and *ṇa* have optionally bent bases. But *da* retains the older form. Only rarely is the new form with the mouth open to the right seen. *Bha* is of the broad type (Fig. 10. IIb) with a notch in the middle. Similarly *ya* has a wider base. *Ra* has its lower tip curved. The subscript *ya* maintains its tripartite form. On the whole the style of writing is pre-Kushāṇa but post-Mathura Kshatrapa. It seems that the end of the Kshatrapa rule of the House of Rañjuvula and Śoḍāsa was followed by disturbances, during which these inscriptions were produced.

With the coming of the Kanishka group of the Kushāṇas to Mathura the style of writing changed rapidly (Pl. VIII). This change appears to be the result of the introduction of the 'pen' style in the earlier period. The general popularity of writing is evidenced by the large number of private records, which show attempts at reproducing the accepted forms in various ways. A common feature in all these inscriptions is the use of the line head-mark in place of the tapering verticals—a practice which is quite understandable in popular writing. This fact accounts for the poor quality of engraving, in which respect these private records contrast strikingly with inscriptions on the statues discovered at Mat near Mathura. Nevertheless, there is a certain unity of form in all the inscriptions from Mathura, except in two records¹—one the Kanishka inscription of the year 14 (Pl. VIII. 4) and the other the Huvishka inscription of the year 33 (Pl. VIII. 6). The specific letters which distinguish these two from the others are the tailed

¹ A newly discovered inscription of Kanishka, dated in the 4th regnal year, uses the hooked variety of *ha*. *Indian Archaeology, A Review*, 1956-7, p. 39.

variety of *ma* and looped variety of *sa* in both, and hooked *la* and *ha* in the first. As these forms became a popular feature in the Gupta records, the date of this inscription of Kanishka has always been doubted. Dr. Lohuizen, on the basis of this doubt, propounded the theory that the inscription omitted the first digit and that it should properly be dated to the 114th year of the Kanishka era. She makes no mention of the inscription of Huvishka. On the other hand, she has included a number of other inscriptions in her re-dated group. But none of these, except one¹ which has a looped *sa*, has the special forms of the Kanishka inscription. Obviously these two inscriptions of Kanishka and Huvishka are intruders in this region. As I shall show, their affinity lies elsewhere, with the Kosam group. To accept this is to reject the whole classification of Lohuizen's thesis, because the remaining discrepancies pointed out by her can be explained on the ground of different hands being employed in the different inscriptions.

Leaving aside these two inscriptions, we find minor variations in the others. Among the vowels the forms of *a* and *u* vary much. *A* shows developments in two distinct ways, as shown in Fig. 10. I. In both the varieties the upper left stroke becomes important, but while in (*a*) this upper stroke slants downwards to meet the vertical and the lower stroke maintains its curved form, in (*b*) the upper stroke makes an angle before meeting with the vertical and tries to assimilate the lower stroke, which sometimes appears below the line. Henceforth the variety (*a*) will be called the curved type and variety (*b*) the angular type. The letter *u* rarely slants its base upwards but more often bends its tip downwards. The bend is more marked in the medial *u*. The short *i* has three short lines in place of the dots, while the form of *e* is almost standardized with the apex of its triangle on the left. *O* has its middle vertical inclined. *Ka* has its middle horizontal variously curved, and in *Kha* the triangular base is now prominent. *Ga* has both angular and rounded forms, while *Gha* has its verticals straightened. *Cha* shows variations in the inverted beaked type, sometimes with graceful bends. *Chha* is of the double-looped variety, but the older oval variety is seen optionally. *Ja* maintains the form of the Roman capital letter 'E' with its vertical sometimes curved inwards, and rarely outwards, while the lowest arm occasionally bends its tip downwards. The older forms of *jha*, *ṭa*, *ṭha*, *tha* and *ba* continue. The stepped *ḍa* has its angles

¹ *Epigraphia Indica*, ii. 209, no. 37.

rounded. *Dha* has a more or less squat form. *Na* appears in all the varieties except the open-mouthed one. *Ta* has its lower appendage rounded, but the Deccani *ta* (with its appendage to the right of the vertical) also appears. The round-backed *da* with mouth open to the right now replaces the older type. *Na* has its base variously bent. *Pa* occurs only in the angular variety, with the left arm some-

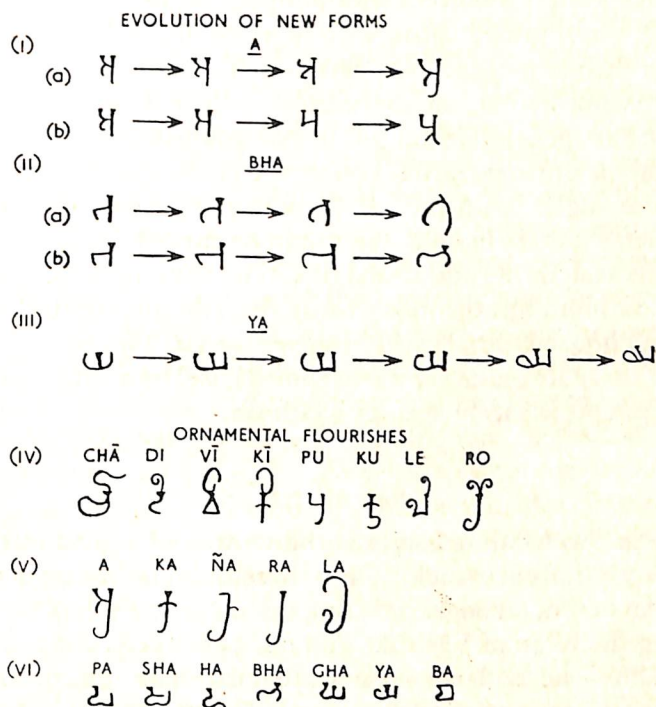


FIG. 10

times curved. *Bha* exhibits two distinct lines of development, as shown in Fig. 10. II. In type (a) the middle bar slants upwards and the right arm is elongated, both making an angle at the apex. This will be hereafter called the angular *bha*. In type (b) the middle bar is elongated and finally notched, with two curved arms at either end. This will be called notched *bha*. *Ma* has its triangular base emphasized by lengthening its lower side. The base of *ya* is flattened and takes various forms, as shown in Fig. 10. III. This base bends gracefully to give differential effect to the three up-rights, which receive special attention. The left arm develops its line head-mark into a curl and finally into a loop, and the middle

arm inclines to the left, while the right presses downwards to balance the loop in the left. *Ra* has either a straight vertical or a bend at its lower tip. The long vertical of *la* is normally straight or gently curved outwards; only rarely it bends inwards. *La* continues the older form—the sign of *ṭa* with an additional hook below. *Va* generally has a triangular form, but occasionally a rounded form is also seen. In both cases the upper stem has vanished. *Śa* has mostly the rounded form, with its right arm optionally longer. The inner stroke makes three varieties: in some it is inclined, in others it is horizontal, either halfway or full length. The three arms of *sha* are generally straight, but occasionally curved. Its inner stroke again is of three varieties as in the case of *śa*. The form of *sa* has definite angles, with the left hook usually drawn in one sweep with the left arm. *Ha* has either straight or curved arms, but greater variation is seen in the additional tick. The conjuncts are formed in the usual fashion, but the most distinctive conjunct of the Mathura style is the hooked variety of the subscript *ya*. The tripartite form (i.e. with three uprights on a horizontal base) as a second element in a compound is rarely seen at Mathura.

Sanchi style

Allied to the Mathura style is the writing observed in the Ku-shāṇa inscriptions at Sanchi. Only three definite inscriptions have so far been noted, all engraved on images. No. 52¹ refers to the year 28 during the reign of Vāsishka and no. 53 to the year 22 and King Vaskushāṇa. The evidence suggests that the main structural history of the Sanchi monuments was over before the coming of the Ku-shāṇas. The letters show the line head-mark. The vowel signs adopt the Mathura style. The most remarkable is the medial *u* in *ku*, which is excessively bent. *Chha* maintains the older oval form, but *da* has a rounded back with its mouth opening to the right. The form of *ṇa* is of the italic χ -type. *Bha* is of the angular variety and the subscript *ya* is hooked.

Inscription no. 56 on the same plate of Marshall has been dated by N. G. Majumdar in the fourth century A.D., probably because of the appearance of the tailed *ma* and open-mouthed *ṇa*. But these appear in the Kosam region much earlier. The style of writing is

¹ These numbers refer to Marshall and others, *Monuments of Sanchi*, iii, pl. CXXXVIII, nos. 52, 53, 54.

not very different from that of the other inscriptions, except that the head-mark in this case is a solid triangle. This inscription may be dated in the beginning of the third century A.D.

Eastern styles

Two different styles were employed in the inscriptions of the eastern region. The first is illustrated in its early stages by the Kanishka inscriptions from Kosam, Sahet-Mahet and Sarnath, and in its later ornamental development by the Sarnath inscription of Āśvaghosha, dated in the year 40 (Pl. VIII. 10), the Allahabad Municipal Museum inscription of the year 23, and the Pahladpur inscription. This style is occasionally met with in the seal inscriptions at Bhita, Basarh, and Sahet-Mahet as late as the fifth century A.D., and it persists longer in the Gupta coinage as an optional style. In this eastern style the line head-mark does not appear at all, but the verticals faintly recall the tapering style of the Mathura Kshatrapas. In the Kanishka group of inscriptions the medial vowel signs follow the Mathura style, but there are other differences. The distinctive letters are *a*, *da*, *bha*, *ya* and *ra*. The older *a*, with its two slanting strokes on the left meeting the vertical at the same point, persists here side by side with the curved variety of the Kushāṇa *a*. Similarly, the angular *da* of the Mathura Kshatrapa type is used along with the round-backed *da*. *Bha* is of the notched type. *Ya* never has the loop at the left arm, nor does it develop into a hooked form in combination with other letters. The lower tip of *ra* is always bent.

In the other group of the inscriptions the change is more marked. The Allahabad Municipal Museum inscription is absolutely in the Mathura Kshatrapa or pre-Kushāṇa style as regards the head-formation, the application of the medial vowels, and some of the letters such as *ka*, *kha*, *ga*, *gha*, *cha*, *chha*, *ja*, &c. The most remarkable is the older form of the round *da* with its mouth open to the left. But other letters such as *na*, *ma*, *śa*, *bha* and *ha* are also different. The Sarnath inscription of Āśvaghosha and the Pahladpur inscription agree in the use of the older fashion of the medial vowels. They also retain the older type of *a* with its two left strokes bifurcated. The subscript *ya* keeps the tripartite form. In these cases we find the survival of the older style in Eastern India, though showing some influence from the Kushāṇa inscriptions of the eastern region. To this same group belongs the

Sahet-Mahet Buddhist stone inscription,¹ in which we find the round-backed *da* and the hooked *ha* of the Kauśāmbī region, but no looped *sa* is seen.²

Kauśāmbī style

The inscriptions of the Magha rulers of Kauśāmbī display another style of writing. They are dated between the years 52 and 139 of an unspecified era. They preserve the tapering style of the eastern region and in the majority of the cases they follow the older system of marking the medial vowels, though occasionally the Mathura style of vowel marking intrudes. But they make a complete departure in preferring the looped *na*, the open-mouthed *ṇa*, the tailed *ma*, the open-mouthed *ṃa*, the hooked *la*, the looped *sa*, and the hooked *ha*. A definite Kushāṇa influence is seen in the use of the hooked variety of the subscript *ya*, while the looped form of *ya* is seen when used singly. These cursive forms of the letters are familiar to us from the Allahabad pillar inscription of Samudra Gupta, and later, in the fifth century A.D., these forms became current in the Gangetic Valley. On the face of this evidence there has been a controversy as regards the era used in these inscriptions. But a comparison makes the distinction clear. By their tapering style they are related to the eastern style of the Kushāṇa period, while the Gupta inscriptions of the eastern region all have the line head-mark—a tendency which became current in this region much later—and are an ornamental development of this Kosam style of writing. This cursive style is distinctive of the Magha inscriptions in this region. Though some of these cursive forms occur exceptionally at Mathura in the Kanishka inscription of the year 14 and the Huvishka record of the year 33, they must be taken as intruding elements from this region. Therefore there should be no hesitation in dating these inscriptions in the Kanishka era. The use of this era in no way implies the subordination of the rulers of Kauśāmbī to the Kushāṇas, but merely shows the continuation of a system of dating that was made popular by Kanishka in this region. In fact the presence of these rulers and the total absence of Kushāṇa inscriptions in the eastern region after Kanishka support the suggestion made by Dr. N. P. Chakravarti³ that this area slipped from the Kushāṇa control.

¹ *An. Rep. A.S.I.*, 1908-9, pp. 133-5.

² There is probably a mistake in the published estampage.

³ *Epigraphia Indica*, xxxi. 175.

The backward area of Madhya Pradesh

The earliest group of inscriptions (Pl. VIII. 12) found in this region comes from Bandhogadh in the former Rewa State, engraved on the walls of artificial caves. The inscriptions are dated from years 51-90 of an unspecified era, and they speak of three generations of kings. Their palaeography reveals a mixed style ranging from crude engraving, for example in inscription no. XI,¹ to well-formed letters such as those of inscription no. IX. The head-formation is also irregular. Some inscriptions have the line head-mark, some the semblance of the tapering style, and in a few the development of the solid triangular head is seen. This mixed tendency is also apparent in the treatment of the medial vowels. Generally the eastern style is preferred, but the Mathura style is also known in medial vowels such as *e* and *o* while the Nanaghat style is found in the case of *mā*, *me* and *mo*. In the formation of the letters a similar mixture is noticed. *A* preserves the old form, with the left strokes making two curves or a short straight line, and joined to the right vertical by a small bar. The angle of *u* is rounded, as is the triangle of *kha* in some cases. *Ga* has both angular and rounded forms. The left arm of *gha* is optionally curved. *Cha* broadens its loop and does not exist in the beaked variety, and *chha* optionally copies the Deccani variety, which has its stem over the left loop. Similarly, the looped variety of the Deccani *ta* is also optionally used here. *Da* retains the older cursive form along with the Kushāṇa type of the round-backed *da*. *Dha* is of two varieties—the bow type and the triangular form. The base of *na* is bent. *Pa*, *pha* and *ba* sometimes have their left arms notched. *Bha* is usually of the angular variety. *Ya* optionally has the loop at the left arm. *Ra* sometimes has its lower tip bent. *La* has three varieties: the cursive type of the hooked *la*, that with a straight vertical, and another with its vertical curved inwards. Similarly, *ha* has the hooked variety as well as the ordinary form. The subscript *ya* maintains its tripartite form. The evidence suggests that, though Bandhogadh is not far from Kauśāmbī, its main contacts were with the Deccan on the one hand, and Mathura or Sanchi on the other. The dates of the inscriptions should be assigned to the Kanishka era.

Another poorly engraved inscription comes from Gunji

¹ The numbers refer to Dr. Chakravarti's publication in *Epigraphia Indica*, xxxi.

(Pl. IX. 8) in the former Śakti State in Chhattisgarh, and is dated in the 5th year of a local ruler called Kumāravaradatta. There is no definite style in the writing, and the writer mixes different forms. He shows acquaintance with the line head-mark, but does not give it regularly. He does not even follow the rule of the equalization of the vertical. Forms such as *ka*, *ta*, *pa*, *bha*, *ma*, *ya*, *ra*, *la*, *sa* and *ha* recall those which were current in the last period. But there are other forms, such as the triangular *dha* with one arm curved, the triangular form of *va*, the optional use of the triangular base for *ma*, the triangular *kha*, and the double-looped *chha* (optional), that point to a connexion with Deccani forms of towards the end of the second century A.D. Only the cursive *da* shows some resemblance to this form in the inscriptions of Ushavadāta in Western Deccan; otherwise there seems to be no point in comparing this inscription with those of the time of Nahapāna. The inscription may be placed in the beginning of the third century A.D.

An inscription on a wooden pillar is found at Kirari near Chandarpur in Chhattisgarh. Here the letters are more developed. They are characterized by the solid triangular head-mark, and the medial vowels follow the Deccani style and show ornamental curves in the case of *i*. *Chha* is double-looped, and *ṇa* and *ṇa* have curved bases. The verticals of *ka* and *a* are gently curved. *Kha* and *va* have triangular bases. *Ya* is of the tripartite form. The inscription may be dated to the middle of the third century A.D.

Eastern Malwa

In the last chapter it has been shown that Eastern Malwa came under the influence of the Mathura Kshatrapa style of writing. The last main stage of construction at Sanchi took place during this period. Subsequently it came under Kushāṇa domination,¹ during the rule of Kanishka and Vasishka. Their inscriptions have been dealt with earlier. After this period Eastern Malwa became a bone of contention between the Western Kshatrapas and the Śātavāhanas, with probably occasional independence. During this period a distinctive style of writing developed in this region, as evidenced by several *yūpa* inscriptions (Pl. IX. 6) dated between 282 and 335 of the Kṛita era (A.D. 225-78) and a Śaka inscription from Kana-khera, not far from Sanchi, also of this century. All these inscriptions show some influence from the Deccan, especially in the case

¹ See above, p. 88.

of the last. The first definite break from the Kushāṇa style of writing, known from a few inscriptions at Sanchi, is seen in the marking of the medial vowels. The slanting strokes of *ā*, *e* and *o* do not occur, but all these strokes are horizontal. This change is due to southern influence, as is suggested by the medial vowel *o* applied to *ma* in its middle—a tradition which originated from the Girnar version of the Aśokan edicts and is maintained in the Nanaghat inscriptions and later Śātavāhana records. The Śaka inscription further introduces the round-backed *ḍa* (as seen in the conjunct *ṇḍa*), the looped *na*, and the looped *ṇa*, all from the Deccan. But there are other features peculiar to this region. The head-formation of the verticals is noteworthy. It is a thick line, verging on block formation, sometimes appearing as triangular. The other important feature is the development of ornamental flourishes, a feature which also marks the Deccan records of the later half of the second century A.D. The forms which connect this style with other North Indian inscriptions are the prominence given to the triangular base in *kha*, the beaked type of *cha*, the curved appendage of *ta*, the looped *ya*, *śa* with its right arm elongated, and the hooked variety of the subscript *ya*. Thus Eastern Malwa at this time was the meeting ground of the Deccani and the North Indian styles of writing.

North-eastern Rajasthan

At Bijayagadh (Pl. IX. 7), in the former Bharatpur State, the most highly ornamental letters have been found in two inscriptions, one of the Yaudheyas and the other of a local king Viṣṇuvar-dhana, dated in the (Vikrama) year 428 (A.D. 372-3). All the letters are characterized by a solid triangular head-mark. Ornamental flourishes occur in all the medial vowels, and graceful curves and bends are found in the verticals and horizontals of the letters. Influences from other regions can be seen in the looped varieties of *na* and *ṇa*, which may be ultimately traceable to the Deccan by way of Eastern Malwa, but the Kauśāmbī source cannot be overlooked, as it is definitely present in the use of the open-mouthed *ṇa* in the inscription of the Yaudheyas. There is not much difference in time between the two inscriptions.

Gujarat and Western Deccan

After the Aśokan edicts the next group of the inscriptions of this region belongs to the time of the early rulers of the Śātavāhana

dynasty. The standard style of the Western Deccan is revealed in the Nanaghat inscriptions, which, as has been shown in the last chapter, cannot be dated earlier than the first century A.D. Next in the series is the Nasik inscription of Haku Siri¹ (Pl. IX. I). This follows the Nanaghat style, and there should not be much difference in date between it and the Nanaghat inscriptions. No head-mark is seen in the inscription and no particular attention has been paid to the equalization of the verticals, though, generally speaking, uniform length is maintained. The medial vowel-marks follow the same old style. Letters such as *ga*, *gha*, *ṭa*, *ṭha*, *ṇa*, *ta*, *tha*, *da*, *na*, *pa*, *ya*, *la*, *sa* and *ha* are in the same tradition. But definite change is seen in the curving of the verticals in *a*, *ka* and *ra*. *Ḍa* has its angles rounded. *Cha* has developed a beaked form, while triangularity is unmistakable at the base of *ma* and *va*. On the basis of these features it can hardly be doubted that this inscription belongs to about the middle of the first century A.D.

The next series of inscriptions belongs to the period when the Śakas and the Yavanas had already become influential in this region. From the numerous private records we select the Karle inscriptions published by M. S. Vats² and Nasik inscription no. 18.³ No head-mark is seen in the letters, but a faint trace of the tapering style can be observed in some of them. The angularity is well marked and some of the long verticals are curved. The connexion with the older style is seen in the forms of *a*, *da* with its mouth open to the left, and the crescentic form of *ya*, and in a disregard for the equalization of the verticals. But the Nasik inscription establishes the connexion between this style and that of the inscriptions of Nahapāna. These inscriptions may be dated in the last quarter of the first century A.D. and the beginning of the second century A.D. With the coming of the foreigners in this region there is a marked improvement in the style of the writing. These inscriptions have not been shown in the plates as it is hard to distinguish them from those referred to in the following paragraph.

The next group of inscriptions of the Western Deccan belongs to the reigns of Nahapāna and Gautamīputra Śātakarṇi (Pl. IX. 2), which partly overlap the earlier series and partly come soon after them. Here again no head-mark is found in the letters. Tapering

¹ *Epigraphia Indica*, viii. no. 19.

² *Ibid.*, xviii. 325-9.

³ *Ibid.*, viii. pl. V.

is faintly noticeable in a few inscriptions of Nahapāna from Nasik. The Karle inscriptions of Nahapāna and Gautamīputra Śātakarṇī show a surprising and remarkable difference in style from those of Nasik, but they are all, no doubt, contemporary. Hence the only conclusion that we can derive is that the older style of writing continued side by side with the new style in Western Deccan right down to the first quarter of the second century A.D. The older style is clearly seen in the persistence of the older system of marking the medial vowels. The change is specially noticeable in the ornamental signs for medial *i* and *ī* and the medial *ā* in *jā*. The two different systems are especially clear in the forms of *a*, *ka*, *kha*, *ga*, *gha*, *ḍa*, *ta*, *pa*, *bha*, *ya*, *la*, *sa* and *ha*. In the older style no particular care is taken over the length of the verticals. But in the new style the verticals are equalized and angularity is clearly marked. The letter *da*, with its mouth open to the left, retains the older form, though it is in some cases cursively drawn. The changes do not indicate borrowing from the Kushāṇa style of Mathura and Sanchi. The optional form of *kha* still gives prominence to the upper hook, while its triangular appendage is insignificant. The stem of the double-looped *chha* is moved on to the left. *Da* is here round-backed. *Bha* is of the broad variety, though the notch does not yet appear. *Ya* does not show a loop or curl, and in the conjuncts maintains its tripartite form. The form of *sa* is still rounded. These fundamental differences clearly show that the writing style of the Western Deccan at this time cannot be derived from the Kushāṇa style of Mathura and Sanchi. On the other hand, they preserve the older features of the Nanaghat style mixed up with the forms derived from the Śaka Kshatrapas of Mathura. It is possible to see some connexion between the Nahapāna inscriptions from Nasik and the 'early group' of the inscriptions from Mathura,¹ which may be dated between the Mathura Kshatrapa style and the Kushāṇa style. Could it be that these Kshatrapas were survivors from the Mathura Kshatrapas in the Deccan? On such an assumption we could understand the presence of the Yavanas and the Śakas in the second half of the first century A.D. in the Deccan, where they make a solid contribution in bringing a new style of writing from the north.

Another definite change is seen in the inscriptions of the Chash-tana group of the Western Kshatrapas (Pl. IX. 5). All their records

¹ See above, p. 85.

so far known are from north Gujarat and Kathiawad. The new style that these inscriptions introduce did not develop from the older Western Deccani style, but, as the detailed description will show, borrowed much from Eastern Malwa and from the Kauśāmbī region. It seems that some new cultural elements must have entered Gujarat during the rule of the Chashtana group of the Western Kshatrapas. The changes are traceable in three distinct features. (i) For the first time in this region special attention is paid to the head-mark. The Junagadh inscription of Rudradāman shows the line head-mark, while a few others have a solid triangular head-mark. The tapering style of the earlier Deccani inscriptions is not found here at all in this period. (ii) Some new shapes of letters are introduced. These remained confined to this region and hardly reached the Deccan. Among them may be mentioned the form of *kha* which gives greater prominence to its triangular base, as opposed to the Deccani *kha* where the upper hook is important. *Ya* with its left arm curled is seen only here. The tailed *ma* and the hooked *ha* are used optionally in the Gadha (Jasadan) inscription of Rudrasena. The hooked type of the subscript *ya* is also employed optionally in this region. There are other forms of the letters which penetrate even to the Deccan. The most important are the forms of *ta* with its rounded appendage and the round-backed *da* with its mouth open to the right. (iii) The third remarkable change is seen in the ornamental forms of the letters. The curves and notches in the verticals and horizontals and the flourishes in the medial vowels are noteworthy. These flourishes seem to be a further development from the earlier practice seen in the Deccani inscriptions. This characteristic is shared equally by the later Śātavāhana inscriptions and it may be that this Gujarat style influenced the ornamental forms of Eastern Malwa. Other Deccani influences are traceable in the use of the medial vowels, the round-backed *ḍa*, the simple *na* and *ṇa* with bent base, and the medial *o* optionally added to the middle of *ma*.

In the Western Deccan the change imperceptibly set in from the time of Vāsishṭhīputra Śrī Puṣumāvi (Pl. IX. 3) who was a contemporary of the early rulers of the Chashtana group. It was from his time onwards that records of the Śātavāhanas are found in the Eastern Deccan and as far south as the Bellary and Shimoga districts. But the Śātavāhanas seem to have lost for good their territories in Malwa, Northern Gujarat, and Kathiawad to the Western

Kshatrapas, who were the real masters of the overseas trade, as is evidenced by their silver currency. The only exception was Gautamīputra Yajña Śrī Śātakarṇi, who managed to lay hands on the region temporarily and to issue some silver currency. The Śāta-vāhanas from this time onwards became predominantly a Deccan power, and the style in their inscriptions influenced the growth of the southern characters. In the inscriptions of the time of Puḷumāvi a mixed style is seen—the older Deccani style continued side by side with the new influences which possibly came from Northern Gujarat and Kathiawad. In Amaravati and other places of the Eastern Deccan the older Deccani style is seen at this time. The ornamental style developed alongside it, and by the time of Yajña Śrī Śātakarṇi this became the predominant way of writing in the Deccan. In the new style the line head-mark is occasionally seen, the curves and the notches characterize the verticals and horizontals, and ornamental flourishes are added to the medial vowels. Two special forms are the looped *ta* and the triangular *dha* with its left side curved. The subscript *ya* retains its tripartite form. Among the older forms that persisted are *kha* with its prominent upper hook, *chha* with its stem to the left of its double loop, the round-backed *ḍa*, the Deccani *ta*, the cursive angular *da* with its mouth opening to the left, the medial vowels attached to the middle of *ma*, the tripartite *ya* showing no curl or loop at the left arm, and *la* with its long vertical curved outwards. The new forms included the angular *a* with an additional hook attached to the angle of the upper left stroke, *o* in the shape of reversed 's', the notched type of the beaked *cha*, the round-backed *da* with its mouth open to the right, and *la* with its vertical curved inwards. In all these cases the older system of applying medial vowels continued, the only change being that the vowel signs were now more ornamental. In fact in the Deccan, in the period from the time of Haku Siri to that of the Nagarjunikonda inscriptions, ornamental forms in the shape of curves began to appear. They assumed standard forms in the time of Puḷumāvi and Yajña Śrī Śātakarṇi.

Eastern Deccan

A number of Buddhist sites, such as Amaravati, Nagarjunikonda, Jogeyyapeta, Ghantasala, and Salihundam, have been explored in this region. The earliest inscriptions have been found at Amaravati. As has been shown in the last chapter, the writing

here is a regional adaptation of the Nānaghat style, while the Bhattiprolu casket inscriptions are a rude version of the same style, with some mistaken forms and the evolution of a new letter *la* to meet the needs of the local dialect. On the basis of the Nānaghat style these inscriptions have been dated in the first half of the first century A.D. This style continued until the time of Puḷumāvi, when new ornamental writing gradually penetrated into this region. The early inscriptions of Chanda¹ fall in this pre-Puḷumāvi period. To the same period belongs an unpublished inscription on a coping stone, recording the name of Rājakumārī Saṁmalī, the style of which is similar to no. 12 of Chanda. The second group of the inscriptions of Chanda is characterized by the optional head-mark, the curving of the verticals, and the extensive use of some of the forms from Western Deccan such as *ta*, *bha*, *ḍa*, and the crescentic *ya*—the older forms obviously affected by the new ornamental style. To the same group belongs the inscription published by Mr. D. Barrett.² These inscriptions should be dated to the time of Puḷumāvi. The inscriptions from Salihundam fall in this same group. The remaining inscriptions from Amaravati can again be divided into two groups: the first (Pl. IX. 11) belongs to the time of the later Śātavāhanas from Yajña Śrī Śātakarṇi onwards; the second shows a style identical with that of the inscriptions of the Ikshvāku rulers of this region, who must be dated towards the close of the third century A.D. There are only minor differences between the ornamental writing of Eastern and Western Deccan during the rule of the later Śātavāhanas. These include the optional form of *i*, which has three small crescents in place of dots, the rare use of *kha* with a prominent triangular base, and the optional use of the oval *va* earlier seen in the Bhattiprolu casket inscriptions. The Nagarjunikonda style is a further development from that of the later Śātavāhanas. It is characterized by the following features: (i) the head-mark is a solid triangle; (ii) the writing shows definite draftsmanship in so far as the main body of the letters is reduced in size to a definite proportion and aligned in the middle with flourishes going up and down; (iii) the verticals are exceptionally elongated; and (iv) the curves are exaggerated. The new forms of the letters seen here are the looped *na*, the looped *na*, and optionally the hooked *ha*. The other change is seen in the

¹ *Epigraphia Indica*, xv. 262-6.

² *Arts Asiatiques*, tome III, fascicule 4, 1956, p. 289.

medial *o* as applied to *to*, *tho*, and *no*. Here we have two separate strokes attached to the top of the letters in such a manner that one diverges from the other. This practice, together with the use of the solid triangular heads, looped *na*, and hooked *ha*, suggests that the writers of these inscriptions received some influence from the Middle Ganges Valley. However, it must be noted that all the inscriptions of the Ikshvākus do not show the same artistic excellence. There are some¹ which are in a very poor hand. Here the long verticals in medial *i* and *ī* are not seen, and even the loop in *na*, *na*, and *ta* is omitted. This second group is a degenerate form of the main Ikshvāku style.

South-west Deccan

The style of this region is traced on the basis of three inscriptions—two of Hāritiputra Śātakarṇi, from Banavasi and Maḷvalli, and one of Siri Puḷumāvi (a later king) from Myakdoni in the Bellary district. The inscriptions of Hāritiputra clearly show two different styles—the Banavasi inscription follows the later Śātavāhana style with its ornamental forms, the line head-mark, and the characteristically looped *ta*. But *dha* is still the bow type of the older style. *Da* is round-backed, with mouth opening to the right. The Maḷvalli inscription (Pl. IX. 10) also shows the line head-mark, but its curves have more prominent upward curls and it keeps the difference in the forms of *cha*, which is elongated, *na*, the base of which is more curved and the upper stroke bifurcated, *ma*, which has its loop slightly to the left, *ya*, the left arm of which is shortened, and *va*, which has a half-rounded form. The sign for the medial *ā* has a downward slant added to the right of the horizontal. The Myakdoni inscription appears to be the latest in this region. The letters have the line head-mark, and the lower verticals are much elongated as in the Nagarjunikonda inscriptions. But the upper strokes do not show the same elongation, nor can we trace the same calligraphic effect as in the Ikshvāku inscriptions. Triangularity is seen in *ma* and *va*, but *kha* keeps the Deccani form without the triangular looped base. *Dha* has the older form of the bow type. *Ta* is not looped, but it has its lower two strokes joined at an angle with the upper stem. *Na* has its base curved. The looped variety is not very clear. *Ga* has a horseshoe form. The style of Myakdoni is a further

¹ See nos. L and M-5 in *Epigraphia Indica*, xxi.

development from that of Maḷvalli. It directly led on to the Kadamba style.

Early Gupta inscriptions

The old palaeographers¹ wrote of a common Gupta alphabet with regional variations. Fleet distinguished two classes—northern and southern—and Hoernle further pointed to a distinction between the eastern and western group mainly on the basis of a few letters. This classification was based on the materials available to them. Newly discovered North Indian inscriptions belonging to the second to fourth centuries A.D. remain unexplained if this concept of the old palaeographers is adhered to. The so-called special letters of the Eastern Gupta alphabet were long in use in the inscriptions of the Magha rulers at Kauśāmbī. Their influence has been traced in the rare inscriptions of Kanishka and Huvishka at Mathura, and in the east at Sahet-Mahet the looped *sa* and hooked *ha* have been found.² The Mathura style of the Kushāṇa writing is seen at Sanchi, but is hardly observable in the east, except that the Mathura system of vowel-marking is noticed in the Kanishka inscriptions of Kosam, Sarnath, and Sahet-Mahet. The other local inscriptions maintain a different variety.³ Malwa was affected by the incursions of the Western Kshatrapas and the Śātavāhanas, and hence the style in that region rapidly changed. In the fourth century A.D. these regional variations are maintained. The Allahabad pillar inscription and the Bhita seals are in the Kauśāmbī style, but the longer inscription of Pavarika at Sahet-Mahet and the seal of Dhruvasvāminī at Basarh show a different eastern style, as seen in the Sarnath inscription of Aśvaghosha. The Eran inscription of Samudra Gupta, and the Sanchi inscription and all but one of the Udayagiri inscriptions of Chandra Gupta II follow the Malwa style, while the Mathura inscriptions of Chandra Gupta II are in the Mathura style. But a change was definitely coming towards the close of this century. The earliest evidence is supplied by the Udayagiri cave inscription (Fleet, no. 6) of Chandra Gupta II, which is written entirely in the Kauśāmbī style. Similarly the influence of Kauśāmbī is traceable in one or two letters at Mathura. In the fifth century A.D. the Kauśāmbī style became the predomina-

¹ Fleet, op. cit., pp. 3-4; G. Bühler, *Indian Palaeography*, pp. 44-48; Hoernle in *Indian Antiquary*, xxi. 29 ff.

² *An. Rep. A.S.I.*, 1910-11, pls. VIa and XIa.

³ See above, p. 89.

ting system of writing in the Gangetic Valley, though the other styles continued to be used occasionally in the local inscriptions. In the face of this evidence it is difficult to choose one or the other style and call it the Gupta alphabet. I have therefore followed the regional and chronological classification. The Gupta inscriptions of Samudra Gupta and Chandra Gupta II are analysed here, and the others will be described in the next chapter.

Basarh and Sahet-Mahet inscriptions

We can definitely assign to the fourth century A.D. the Basarh clay seal of Dhruvasvāminī and the inscription of Sihadeva Pavarika from Sahet-Mahet.¹ In both these inscriptions the medial vowel marks follow the Mathura style of the Kushāṇa inscriptions. In the Sahet-Mahet inscription the tapering verticals can still be observed, but in the Bhita seal the block head-mark is found. Mathura influence is also seen in the looped variety of *ya*, and in combination this *ya* is of the hooked type. Other letters, such as *ma*, *sa*, *ha*, and *la*, maintain the older forms as seen in this region.

The Kauśāmbī style of the fourth century A.D.

This way of writing is seen in the Allahabad pillar inscription of Samudra Gupta, the Gadhwa inscription of Chandra Gupta II, the Udayagiri cave inscription of Chandra Gupta II (Fleet, no. 6), the Bhita seals, and the Susunia rock inscription of Chandravarman.

The Susunia inscription (Pl. XI. 1) shows a monumental style. The engraving is of a high quality. The angular features are conspicuous in the formation of the letters. The cursive forms, which copy the Kauśāmbī style, include the looped *na*, the open-mouthed *ṇa* with a loop at the left, the tailed *ma*, the hooked *ha*, and the looped *sa*. The subscript *ya* is of the hooked variety. *Ra* is a straight vertical. The right arm of the letters such as *ta*, *ga*, and *śa* is longer than the left arm. The head-mark is characterized by a solid triangle. The medial vowel marks generally follow the older eastern style, but the Kushāṇa *ā* and *e* are optionally used. In the case of *ṇā* a hooked mark is added to the lower right of the letter. The medial *i* also shows a curled head. The form of *sha* in the conjunct

¹ *An. Rep. A.S.I.*, 1910-11, pl. XIb.

shṭa is not very different from the looped *sa*. This form is also found in the Allahabad inscription. In Bengal in the fifth century *sha* is replaced by *sa* (Pl. XIb. 2). It seems that a confusion arose between *sha* and *sa* at this time. On the whole it is surprising to find an inscription in the Kauśāmbī style in Bengal in the middle of the fourth century A.D., to which period King Chandravarman is generally assigned. Palaeographically the Susunia inscription does not seem older than the close of the fourth century A.D. But an earlier intrusion from Kauśāmbī is not unlikely.

The Kauśāmbī style of the fourth century A.D. can be best studied in the Allahabad pillar inscription of Samudra Gupta (Pl. X. 1). The writing in this inscription shows a further development from the Kauśāmbī style of the second to third century A.D. The tapering style of the earlier Kauśāmbī inscriptions is no longer found. The head-formation has a definite line-mark, which in some cases appears to be notched. The medial vowels keep up the eastern style in some cases but copy the Kushāṇa system in others. The medial *ā* bends its horizontal tip and in the case of *ṇā* it is attached to the lower right side. The medial *i* lengthens its hook so as to carry its end right below the head-mark. This is observable especially in *ri* and *ti*. The medial *ī* has its right arm longer than its left. The medial *u* is always crooked. The medials *e*, *ai*, *o*, and *au* are in the Kushāṇa style: the medial *e* has a single slant to the left, *ai* has two, the medial *o* has one on either side, and *au* has a third vertical mark added in the middle of the *o*-mark. In the case of *mā* the hook is attached to the right arm, and in the case of *ṭā* it is turned upward. An upper slant added to the sign of *ṭā* makes it *ṭo*. In *gu*, *bhu*, *tu*, &c., the hook of *u* is turned upward. The initial *a* has only the angular form with its lower left stroke drawn at an angle. The initial *i* has two dots one above the other and a vertical on the right. The initial *u* rounds its angle. *Ka* has its horizontal bent. The triangular base of *kha* is prominent. Its upper hook, which now has a line-mark at the foot, is found in curved and flat varieties. The right arms of *ga*, *ta*, *bha*, and *śa* are prolonged—a practice seen henceforward in all the North Indian inscriptions. *Ga* has both round and flat tops. The left limbs of *kha*, *ga*, and *śa* have foot-marks. *Gha* has either its left arm or its base curved. *ṣa* has all its three arms slanted downwards, while the lowest sometimes bends still farther. *ḍa* maintains the stepped form, but prolongs the lower vertical. *Na* has developed a loop in the open-

mouthed type, and *tha* has optionally a line in place of the centre dot. *Da* is of the round-backed type, but *dha* has almost an oblong form. *Na* is of the looped variety. Notches are seen in the sides of *pa*, *pha*, *ba*, and *sha*. *Bha* is of the angular variety with its right arm farther extended, as already noticed. *Ma* is of the tailed variety. *Ya* has a loop at the left arm, and in combination it is of the hooked variety. *Ra* is a straight vertical. *La* and *ha* are of the hooked type and *sa* of the looped variety. The mid-line of *sha* is either horizontal or sharply bent down to the base, producing a form very close to *sa*. Among the compounds may be noted the form of *nia* in combination with *ha*. Finally it must be remarked that the long verticals do not show curves in this style of writing.

The Eastern Malwa style of the fourth century A.D. is the continuation of the ornamental style that was seen in this region in the earlier century. The Bijayagadh inscriptions, already described, differ from this style in the formation of the head-mark and also in fondness for over-ornamentation. Of the present style the classic examples are the Eran inscription of Samudra Gupta and the Udayagiri cave inscriptions of Chandra Gupta II, dated in the (Gupta) year 82. These inscriptions show solid square head-marks. But the Sanchi inscription of Chandra Gupta II, dated in the (Gupta) year 93, generally exhibits solid triangular head-marks, though in some cases it is difficult to distinguish these from the block head-marks. In all these inscriptions the medial vowels follow the system seen in the other inscriptions of this region. The main difference from the eastern style is in the addition of ornamental curves to the long verticals and of notches at the sides. Cursive forms are not found here, except the looped *na*. The open-mouthed type of *na* is not found, but the letter develops a loop at the base, as we saw in the Bijayagadh inscription of Vishṇuvardhana. The base of *ma* is an oval, and generally tilted to the left. *Bha* optionally is of the southern notched type. An important change is seen in the letter *ya*. The loop at the left arm of this letter seen in the Mathura style gradually sinks into insignificance. Other southern features can be marked in the equal armed *ga*, *ta*, and *śa*, the broad variety of *cha*, the angular back of *ḍa* and *da*, the deep inward curvature of the left side of *ba*, *va* with a quadrangular loop on the left side of the vertical, and *ña* in the conjunct *ṇka* with its vertical deeply curving inwards. On the whole the forms are generally in the Malwa style.

In the two Mathura inscriptions of Chandra Gupta II (Pl. XII. 1) further development from the earlier Kushāṇa style can be seen. I do not agree with D. R. Bhandarkar¹ that the style of these is hard to distinguish from that of the Kushāṇa records. In these inscriptions we have notched head-marks generally tending to become solid triangles. The letters *ga* and *śa* have developed flat tops, while their right arms, like those of *ta* and *bha*, are prolonged downwards. *Tha* has a line in place of the centre dot. *Dha* in some cases is of the oblong form. The angle of *o* is rounded. The medial vowels are all of the eastern type. The long *ā* is formed by adding a hook to the vertical of the initial *a*. Eastern influence is seen in the use of the open-mouthed *ṇa* and *ma* with a curve at the left corner, as is also seen in the Karamdanda and Bhitari inscriptions.² The last feature is known only from one example. No ornamental flourishes are seen in these inscriptions.

On the whole the early Gupta inscriptions carry further the regional styles of the third century A.D. They differ from the earlier inscriptions in the formation of the head-mark, in the evolution of the uniform medial vowel marks, and in the development of a few letters. The Kushāṇa style of the medial vowels persists in the coin epigraphy, which appears to have been largely influenced by that of the Kushāṇas.

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THE PROTO-REGIONAL SCRIPTS

Definition

THE older palaeographers, such as Burgess, Fleet, Burnell, Bühler and others, have written of 'Northern' and 'Southern' alphabets from about A.D. 350. Bühler¹ notes nine important 'common' characteristics of the northern and five of the southern alphabets. These 'common' features are limited neither to the north nor to the south, and they are not coextensive with these two geographical divisions. The presence of the southern character in Malwa, north of the Vindhya, and of the proto-Nāgarī script in the Rāshtrakūṭa records, south of the Vindhya, has long been known. Similarly, the style of writing seen in the Allahabad pillar inscription of Samudra Gupta is not found throughout North India, nor can we choose any particular style in the Peninsula and call it southern. On the other hand, this division leaves entirely out of account a most important group of inscriptions, which show a square head-mark (Pl. XV) and are confined to the Deccan and Eastern Malwa. The fundamental changes that were then going on in Gujarat and Kathiawad, a region which in the earlier period was closely associated with the southern characters, also remain unexplained. If these broad geographical divisions are set aside, it is not difficult to see the evolution of the characters from the writing styles traced in the last chapter. These styles tended to become localized and affiliated to the various cultural regions in the sub-continent. These regional styles might have differentiated still further but for two important factors which were instrumental in establishing a link between them and also in governing a uniform pattern in their development. The first was the use of a common language, Sanskrit, which helped in the easy movement of literates and scribes from one region to another and the quick dispersal of technical skill or styles of writing. The second was the growth of larger kingdoms, which by their very nature had to adopt a uniform

¹ *Indian Palaeography*, Eng. tr. pp. 45 and 61.

style of writing within their jurisdiction. It is on such assumptions that we can understand how the Kauśāmbī style of writing of the second and third century A.D. gradually spread throughout the Middle Ganges Valley and as far east as Bengal after it was adopted by the early Guptas; but later, in the sixth and seventh century A.D., as a result of the growth of the power of Kanauj, this style was ousted and replaced by another style that spread from the western region. Such political changes retarded the growth of regional cultures and they had their effect on the style of writing as well. With the growth of 'national' (in the sense of regional) states in the subsequent period the regional scripts also emerged fully. They grew out of the differences noticed in the period ending roughly in the eighth century A.D. These different styles are termed here proto-regional scripts, as they can be best understood on the basis of regional cultures rather than of wide geographical divisions.

Main divisions

In order to understand the interrelationship of the proto-regional scripts they are grouped here under four main heads:

A. *Scripts of North India.* These show a uniform pattern of development both in the body of the letters and in the application of the medial vowels. The changes in ornamentation and technical adaptation affect all the scripts equally.

B. *Scripts of Gujarat, Rajasthan, and Central India.* There is a medley of scripts in these areas. The earlier influences of the south fade away and the northern influences come in, but at the same time we notice some independent developments.

C. *The Deccani scripts.* This name applies to those characters which have the square head-mark. It was widely adopted from Malwa to the southern kingdoms. The head-mark brings them under one group, but they are differentiated from one another by following the general styles of the regions where they were used.

D. *The scripts of South India.* There is also a general unity of development in these scripts. The shapes of the letters as well as the medial vowels follow a common pattern.

Under these four broad heads fall nine main geographical divisions which clearly emerge in the writing styles of this period, though there is some overlapping owing to political and other factors:

A I. *Middle Ganges Valley.* This region includes the greater

portion of modern Bihar and Uttar Pradesh but excludes the westerly districts which border on Mathura. Its influence reached as far south as Orissa and the forest regions of the Vindhyan belt. Under the rule of the Imperial Guptas the style of this region was in great favour and it spread into Bengal in the east and Nepal in the north, and exerted considerable influence on the scripts of the westerly regions. The Mehrauli iron pillar inscription of Chandra¹ is entirely in this style, as also is the Udayagiri cave inscription (Fleet,² no. 6) of Chandra Gupta II. In the post-Gupta period the western styles overran this region and ultimately paved the way for the Nāgarī script.

A II. *Eastern India.* This region properly includes Bengal, Assam and Orissa, but Orissa was already linked with the Middle Ganges Valley. Assam had no separate script of its own. The late inscriptions found there followed the style of Bengal. With Bengal is grouped Nepal, as the writing style of both these regions is derived from the Middle Ganges Valley and there are many remarkable links between the scripts of these two areas. Each of these will be treated as a sub-class—II (a) Bengal and II (b) Nepal. With the rise in the eighth century A.D. of the Pālas, who ruled over the delta as well as part of the Middle Ganges Valley, the regional style was modified under extraneous influences. The growth of proto-Bengali did not take place here until two centuries later. But certain tendencies that originated in this period led on to the growth of the later regional script.

A III. *Mathura and the north-western region.* Mathura had been the centre of a line of the Northern Kshatrapas and later of the Kushāṇas. Their important contribution to the development of Indian writing has been noted in the previous chapters. This Kushāṇa style of Mathura continued to influence the region in the Gupta period. Its influence is also marked in the Karamdanda inscription of Kumāra Gupta I and the Bhitari pillar inscription of Skanda Gupta.³ In the time of Harshavardhana this style merged with the Rajasthani style of writing and is represented in this region by the well-known Lakhamandal inscription on the Upper Jamuna.⁴ The ornamental features of this style appear to have originated from the eastern region, but it spread in the whole of the Gangetic Valley,

¹ See below, p. 144.

² All references to Fleet are to his *C.I.I.* iii.

³ See below, pp. 122-3.

⁴ *Epigraphia Indica*, i. 10-15.

where it led on to proto-Nāgarī, but in the hill states of the north-west, as evidenced from Kashmir and Chamba, the Mathura style continued, leading to the Śāradā script.

B IV. *The Rajasthani style.* With Rajasthan was intimately associated Malwa, which, because of its peculiar geographical position, was open to influences from the north as well as the south. The curled tails of the verticals and the side notches continued in the Gupta period, but towards the close of the sixth century A.D. a distinctive style developed which, along with the Mathura style, underwent a further change to become the precursor of the Nāgarī script. This region was the original homeland of Nāgarī, and it was from this source that the Rāshtrakūṭas derived their proto-Nāgarī writing.

B V. *The Kathiawadi style.* This is a continuation of the writing style known from the inscriptions of the Western Kshatrapas. It is easily traceable in the Maitraka records and is intimately connected with the writing known from the inscriptions of the Traikūṭakas and the Gurjaras of Broach.

C VI. *The Deccani style.* This is found for the first time in the inscriptions of the Vākāṭakas, in the Eran pillar inscription of Samudra Gupta, and in the Udayagiri cave inscription of Chandra Gupta II (Fleet, no. 3). In the fifth century A.D. its influence was felt in the inscriptions of the Kadambas, the Gurjaras of Broach, the Western Chālukyas, and the Pallavas and the Madharas in Andhra. It survived in the inscriptions of the kings of Śarabhapura and those of the Eastern Gaṅgas to the end of the seventh century A.D. Its influence is also noticeable in the Bilsad inscription of Kumāra Gupta I. This style did not leave any trace in the later scripts.

D VII. *Mysore and Mahārāshṭra.* This style is a continuation of that known from later Śātavāhana records. Its most fully developed form is found in the inscriptions of the Chālukyas and the Rāshtrakūṭas, by which time it had attained a distinctive character, to which the name of proto-Kannadi can be given.

D VIII. *Andhra.* The style known from the Ikshvāku records died an immediate death after their collapse. Only faintly is its character recognizable in a few inscriptions of the Brihatphalāyanas and the early Pallavas. Side by side with the Deccani influence we notice here a close similarity to the style known from the Chālukya inscriptions, especially after the establishment of the Eastern Chālukyan dynasty. This close similarity was maintained

even after the regional scripts, Telugu and Kannada, were later evolved, but in this period the style had some relation to the writings of the extreme south.

D IX. *South India*. Not much evidence is available from the extreme south. The early inscriptions of the Pallavas show the long verticals of the Ikshvāku style and also give evidence of a technical tradition seen earlier in the Bhattiprolu inscriptions. The Sanskrit records are again divisible into two styles, one mainly found in inscriptions from the northern part of the region, showing influence from the Vākāṭaka and Chālukyan records, and the other occurring in southern inscriptions from Kāñchī, Trichinopoly, Annamalai, Mamallapuram, &c., which are all very late, and which display a new and special style showing great draftsmanship in the formation of the letters. This is the Grantha style of the seventh century A.D., but so far its earlier counterpart has not been found. In a few letters the influence of the north is traceable and in others we can discern the influence of the Deccani style. But the Grantha style must have had its precursor in this very region. It cannot be wholly derived from the north or the Deccan.

This division agrees almost entirely with what we learn from the account given by Alberuni,¹ provided we bear in mind that he describes conditions obtaining two centuries later. Out of the eleven scripts mentioned by him three, viz. Ardhanāgarī, Malwārī, and Saindhava, which were current in Bhatiya and Sindh, are hardly known to us, as no record from this region has so far been published. Three inscribed potsherds, which were recently discovered in the Bhambhor excavation in Sindh,² show a style approximating to Ardhanāgarī. One style, which Alberuni calls Bhaikshukī, used in Uduṇpur in Pūrvadeśa (possibly Audanḍapura, modern Bihar Sharif—a seat of an important Buddhist monastery), was probably a special writing used by the Buddhists, as he himself says. The remaining scripts, Siddhamātrikā, Nāgara, Gaurī, Lārī (or Lāṭī, i.e. Kathiawadi), Karṇāṭa, Andhrī, and Dirwārī (i.e. Drāviḍī), are not difficult to recognize. Of these a little confusion arises between Siddhamātrikā and Nāgara. The latter term is definitely derived from Varṇanāga,³ applied to a style

¹ *Alberuni's India*, Eng. tr. by E. C. Sachau, London, 1910, i. 173.

² The potsherds were sent to me by the Director of Archaeology, Pakistan, for decipherment.

³ Actually the phrase is 'Varṇa-nāga-kṛipāṇikā', because an extra *kṛipāṇa* (dagger) is placed on the *nāga* (serpent); see *Epigraphia Indica*, xxxi. 28.

of writing widely current in Malwa, as Alberuni rightly notes. Siddhamāṭṛikā, according to him, was current in Kashmir, Madhyadeśa (i.e. 'the region round Kanauj') and Vārāṇasī (Banaras), and must refer to the style termed by Fleet 'kuṭila' and Bühler 'acute-angled', but by about tenth century A.D.¹ it was displaced by Nāgarī in the Ganges Valley and Śāradā in Kashmir. The use of the term 'Siddhamāṭṛikā' for the *kuṭila* writing is also confirmed by Ziogon's note on the script of the Horiuzi Palm-leaf MS.²

New techniques

This development of the alphabets reached its culmination later, when the regional languages developed and they became associated with one or the other script. That stage was a long way ahead. This chapter is concerned only with the process of change that the letters were undergoing at this period. This will be analysed, as in the last chapter, on the basis of three noticeable stylistic tendencies. The first was the result of a technical development, either in the use of new tools or in the new manner of using the old tools; the second was due to the taste for better or ornamental forms; and the third was dictated by a desire for speed and simplification, which is the real motive in cursive writing.

(i) *Technical*. Two different types of tools were used for writing and these had a marked influence on the shape of the letters. As we have seen, the pen was used throughout North India. The use of the pen gave three important characteristics to the letter-forms: (a) a definite head-mark to the letters of the north. It assumed the shape of a solid triangle, called by earlier palaeographers 'wedge' or 'nail-head'. (b) From the fifth century A.D. onwards the pen leaves behind a blot at the foot of the verticals, which gradually begins to grow and, as shown in Fig. 11, new forms of the letters are evolved. In some cases this blot develops a tail as in *da* and *ra*, and in some, as in *bha* and *sa*, it grows into a triangle and later opens its mouth. This blot will be henceforward referred to as the foot-mark. (c) From the sixth century there is noticeable a peculiar twist of the pen which makes an interplay of thick and thin lines in the ornate medial vowels (Fig. 12). The same tendency led to

¹ See Vogel, *Antiquities of Chamba*, for the presence of *kuṭila* character in Chamba.

² Max Müller and B. Nanjo, *The Ancient Palm Leaves* (Horiuzi Palm-leaf MS.); *Anecdota Oxoniensia*, vol. i, pt. iii, Oxford, 1884, pp. 14 and 16.

the origin of the *kuṭila* letters (Fig. 13). The use of the pen in the north was mainly responsible for the new shapes which so fundamentally differed from the southern characters.¹

About this time writing in the south shows the growing influence of the stylus, as a result of which the letters become more rounded

EVOLUTION BY THE PEN TECHNIQUE

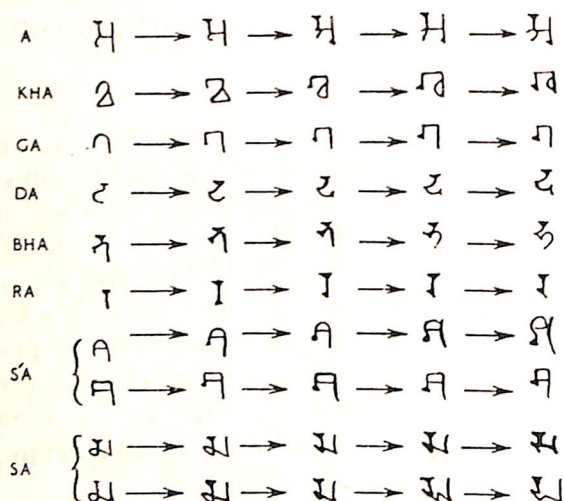


FIG. 11

and have waves on their arms, as shown in Fig. 14. These waves are probably due to the nature of the palm-leaf on which stylus was used—a style developing from this source affecting the inscriptions as well.

(ii) *Taste for ornamentation.* Different kinds of ornamentation are noticeable in different regions. Their details will be discussed when the individual palaeography is taken up. Generally speaking, the embellishment is seen in the shapes of the letters (Figs. 13, 15) and in the formation of the medial vowels (Figs. 12, 16). This development is again seen in the formation of the lines in the respective scripts, as dictated by the pen and the stylus. Both in the north and the south the medial vowels are the first to show flourishes. The best examples from the north are seen in the Bilsad inscription and the Mehrauli pillar inscription, both of the fifth century (Fig. 12). In the sixth century, as illustrated in the inscrip-

¹ See Pattadakal pillar inscription of the Chālukyan king Kīrtivarman II, c. A.D. 747-57, which gives the same inscription in the two characters, northern and southern; *Epigraphia Indica*, iii. 4-6.

tions of Yaśodharman and Mahānāman, the medial vowels grow to their full extent. In the seventh century the flourish is further embellished by floral decoration (not shown in the plate). From

MEDIAL VOWELS IN NORTH INDIA						
BILSAD	MEHRAULI	YAŚODHARMAN	MAHĀNĀMAN	BANSKHERA	MADHUBAN	
INS. BHĀ	INS. RĀ	INS. PĀ RĀ	INS. KĀ BHĀ	PL. HĀ	PL. HĀ	
DHI	DHI	VI	RI	VI	RI	DHI
HĪ	KĪ	DHĪ	DHĪ	HĪ	ŚRĪ	
PU	MU BHU	YU KU	SU	GU	TU	
PŪ	TTRŪ	BHŪ MŪ	BHŪ SŪ	PŪ	DŪ	
ME	VE	ŚRE	YE RE	DE	SE	
YAI	ŃCHAI	DAI	CHCHAI	DAI	VAI	
LO	TO	YO	TO PTO	SO	CHCHO	
KAU	RAU	LAU	NAU	NAU SAU	SAU	
MRI	SRI	NRI	KRI	GRI		

FIG. 12

the last quarter of the sixth century A.D. another tendency is marked in the North Indian inscriptions. The right vertical limbs of the letters become slightly bent inwards (*kuṭīla*), and hence Fleet's term *kuṭīla* alphabet. At the same time, because of this bending, this vertical makes an acute angle with the base line, and hence Bühler's term 'acute-angled' alphabet. Bühler realized correctly that this acute angle is found much earlier than the *kuṭīla* tendency and hence he traced this type of writing back to the fifth century A.D. But such a tendency can be seen in letters such as *sa*

even earlier. Thus it is very difficult to adhere to Bühler's term. Fleet's term, though derived from a late inscription,¹ if understood to imply the style of writing which shows ornamental forms with

ORNAMENTAL EVOLUTION IN THE NORTH

I	oo → ॐ or ॐ
U	𑀓 → 𑀔 → 𑀕 → 𑀖 → 𑀗
E	𑀘 → 𑀙 → 𑀚 → 𑀛 → 𑀜
O	𑀞 → 𑀟 → 𑀠 → 𑀡 → 𑀢
KA	𑀤 → 𑀥 → 𑀦 → 𑀧 → 𑀨
KHA	𑀩 → 𑀪 → 𑀫 → 𑀬 → 𑀭
GHA	𑀮 → 𑀯 → 𑀰 → 𑀱 → 𑀲
JA	𑀴 → 𑀵 → 𑀶 → 𑀷 → 𑀸
THA	𑀺 → 𑀻 → 𑀼 → 𑀽 → 𑀾
DHA	𑀿 → 𑁀 → 𑁁 → 𑁂 → 𑁃
NA	𑁅 → 𑁆 → 𑁇 → 𑁈
PA	𑁊 → 𑁋 → 𑁌 → 𑁍 → 𑁎
YA	𑁐 → 𑁑 → 𑁒 → 𑁓 → 𑁔
LA	𑁖 → 𑁗 → 𑁘 → 𑁙 → 𑁚
VA	𑁜 → 𑁝 → 𑁞 → 𑁟 → 𑁠
HA	𑁢 → 𑁣 → 𑁤 → 𑁥 → 𑁦

FIG. 13

their right limbs slightly bent, may be retained, as it conveys a chronological sense. This style survives the end of the period dealt with in this chapter.

In South India embellishment is seen in the upper (in the case of *la*) and lower (in the case of *a*, *ka*, *ta*, and *ra*) curves of the letters (Fig. 15). In the earliest Pallava, Br̥hatphalāyana, and Kadamba² records of the fourth century A.D. the verticals are unusually pro-

¹ Dewal inscription of (Vikrama) year 1049. See Cunningham, *A.S.R.*, i. 355, pl. LI.

² Chandravalli inscription of Mayūraśarman, *An. Rep. of Mysore Archaeological Survey*, 1929, p. 50, pl. XI.

longed downwards, probably from the influence of the Ikshvāku records, but later the normal length is restored. In the seventh century A.D. the curves grow either almost into a circle, as in the

EVOLUTION BY THE STYLUS TECHNIQUE

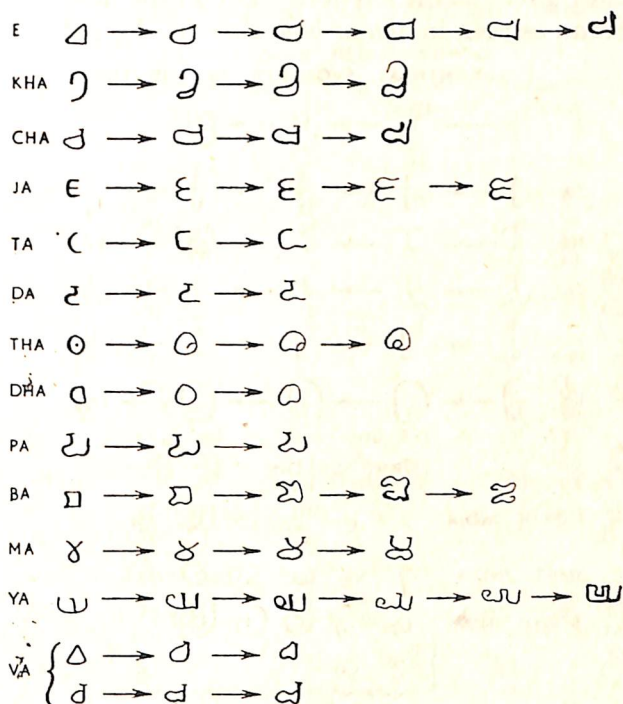


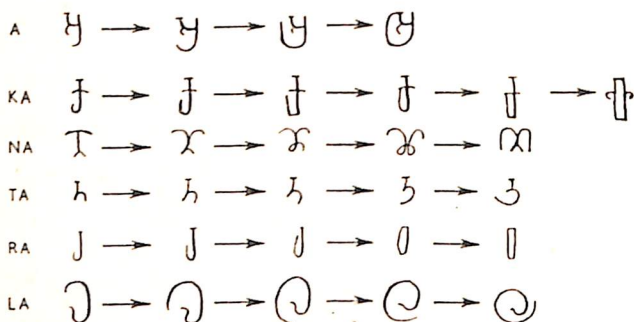
FIG. 14

case of *a* and *la*, or into double parallel lines, as in the case of *ka* and *ra*. The medial vowels in the south follow also a different course of development (Fig. 16). Fundamental differences from the north are seen in the case of *au* and *ri*. The medial vowel *o* in *lo* is cursive. The right limb of *ā* is prolonged downwards as is *e* on the left side of the letters. The most important development is seen in the application of the medial vowels *e* and *ai*. Unlike the North Indian fashion, where they are applied above the letter, in South India the signs hang downwards, in some cases starting from the middle of the letter. This tendency comes down from the practice seen in the letters *mā* and *me* in the Girnar version of the Aśokan R.E.¹ The medial *i* grows into a full circle, but optionally in the extreme south it retains the form of a broad half circle. The

¹ See above, p. 47.

medial *i* has an additional line, curl, or circle to distinguish it from the medial *i*. The curl of the medial *u* grows until in the seventh century A.D. it is doubled. For medial *ū* an additional mark is given either on the right or on the left of the sign for the medial *u*. Another rounded form, as seen in *bhu* or *bhū*, also develops in the south.

(a) ORNAMENTAL EVOLUTION IN THE SOUTH



(b) FORMS OF OM

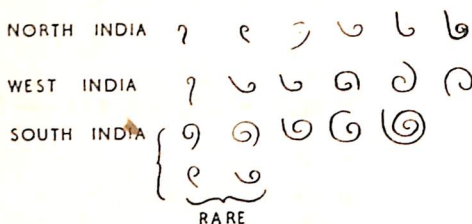


FIG. 15

(iii) *Tendency to simplification.* This tendency is seen throughout and writers adopt it whenever they prefer and whatever their writing material. It would be wrong to say that the simplified style was usually adopted in the case of copper plates or manuscripts. The two copper plates of Harshavardhana (Fig. 12) are in two different styles—the Banskhera plate in the ornate style and the Madhuban plate in the simplified style. The Sonpat seal of Harshavardhana (Fleet, no. 52) is in the ornate style, but the Asirgadh seal of the Maukhari Śarvavarman (Fleet, no. 47) is in the simplified style. The two Bodhgaya inscriptions again illustrate this point, which was realized even by Rudolf Hoernle when he wrote that some parts of the Bower MS. are in an ornate style and others are written in a slovenly manner.¹ Here the writing material cannot

¹ *Indian Antiquary*, xxi. 30.

have been responsible for differences in the style of writing. A tendency to simplification is to be found in the hands of some writers but not of others. Wherever it is traceable, it can be seen to follow the ornate or complicated way of writing, or at least the accepted form already achieved by a particular technical process,

SOUTH INDIAN MEDIAL VOWELS											
HIRAHADAGALLI INS 4 th cent			KADAMBA INS 5 th cent			CHĀLUKYA INS 6 th cent			PALLAVA INS 7 th cent		
									6 th cent (CHALUKYAN STYLE)		
TĀ	HĀ		MĀ	BĀ		THĀ	NĀ	MĀ	PĀ	HĀ	KĀ
𑌕	𑌖		𑌗	𑌘		𑌙	𑌚	𑌛	𑌜	𑌝	𑌞
CHI			CHI	SĪ		LI			VI	VI	SĪ
𑌟			𑌠	𑌡		𑌢			𑌣	𑌤	𑌥
JĪ			RĪ	NĪ		TĪ	KĪ	VĪ	TĪ		SĪ
𑌧			𑌨	𑌩		𑌪	𑌫	𑌬	𑌭		𑌮
KHU			GU	NU		NU			NU	BHU	DU
𑌰			𑌱	𑌲		𑌳			𑌴	𑌵	𑌶
BHŪ	DŪ		BHŪ	PŪ		DHŪ	BHŪ	BHŪ	SŪ	BHŪ	PŪ
𑌸	𑌹		𑌺	𑌻		𑌼	𑌽	𑌾	𑌿	𑍀	𑍁
PE, ME			ME	KHE		SHE			YE		GE
𑍂	𑍃		𑍄	𑍅		𑍆			𑍇		𑍈
GO	LO	MO	LO	CHO		LO	MO		TO	RO	YO
𑍉	𑍊	𑍋	𑍌	𑍍		𑍎	𑍏		𑍐	𑍑	𑍒
			DAI						SAI		YAI
-			𑍈						𑍉		𑍊
-			PAU	THAU		BHAU			PAU		
-			𑍋	𑍌		𑍍			𑍎		
			KRI			GRI			KRI	GRI	KRI
			𑍇			𑍈			𑍉	𑍊	𑍋

FIG. 16

the desire being to reduce the time taken in producing the complex form without sacrificing its individuality. This description applies only to simplified as distinguished from cursive writing, and I confine myself to the former because I have so far found no true example of early Indian cursive writing,¹ be it on copper plate, stone, palm-leaf, or birch-bark. It is not possible to understand the

¹ I reserve the term 'cursive writing' for quick hand-written documents in which the letters of the same words grow tails and are connected together. This is not the case in any of the manuscripts discovered so far. Hence we are not faced with problems connected with cursive writing though we have, of course, cursive forms as a result of simplification.

whole process of simplification as no cursive writing is available for comparison. What I am trying to do is to determine the adoption of the particular simplified forms in the usual course of writing and to find as far as possible the time when they became current. From the available material we can get only a few clues to elucidate

EVOLUTION BY SIMPLIFICATION

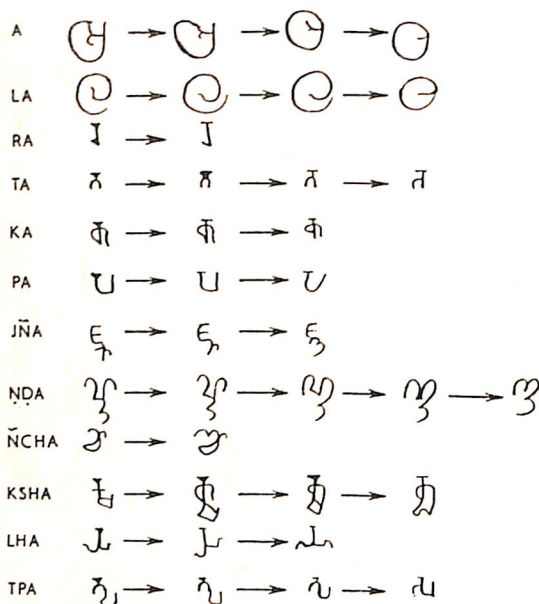


FIG. 17

the way in which simplified writing was gradually developing. This is best illustrated in the development of the forms *a* and *la* in South India (Fig. 17). This simplification much affects the conjuncts, in which either the first (as in the case of *nda*), or the second (as in the case of *jna*), letter is reduced. The same is the case when the second element of the conjunct is *ya* or *ra*. In these conjuncts the writer neglected the rule of grammar, which requires the first element of the conjunct to lose its inherent short vowel *a*, and hence become constricted, in order to combine with the second element. He was influenced solely by the motive of facile writing. It is this same tendency which reduces the triangular head-mark to a simple horizontal line, as in the Indor plate of Skanda Gupta and in the series of Damodarpur copper plates. Another feature is noticeable in the inscriptions of the north-western region, where

the triangular foot-mark of *ra* gives place to a simple slant. The simplification also affects the medial vowels, in which the ornate forms give place to straightforward lines. Later still the bent (*kuṭila*) right limbs of the letters in the north become straightened but leave a tail behind—a feature of most of the North Indian letters. This tendency is to be found in its final stage in this period. It is fully marked in the development of the regional scripts of the next period. In fact the preference for simplification in one or another way is one of the important factors contributing to the differentiation in the regional scripts. We are not concerned with this process in this chapter, which deals mainly with (i) the writing style that a particular region inherited in the fourth century A.D., (ii) inter-regional influences due to the setting-up of new kingdoms or the movement of the scribes, (iii) the change due to the technical development in the ordinary forms of the letters and in ornamental tastes, and (iv) the full ornamental letters or their simplified forms.

New symbols

The most conspicuous symbol in the copper plates of this period is that which stands for the auspicious sound *om*, the various forms of which are given in Fig. 15*b*. It will be seen that in North India it generally assumes the form of a curled head with a tail either to the left, right, or bottom. In South India this tail is generally spiral. Another development is seen in the case of a final consonant used without any vowel. The usual practice was to write the final consonant in smaller size slightly below the usual line. In this period we see the use of an arc-like mark over the consonant, or a slanting mark attached to the right foot of the consonant in order to indicate that the vowel is absent. This last practice is the real source of the modern *halanta* (i.e. consonant without vowel). The use of the *jihvāmūliya* and the *upadhmāniya* has been noted in the last chapter, and the forms given there were usually adopted in North India. In the south slight variations are seen, and these will be discussed in the relevant sections. The cross-form of *ṛi* noticed in the last chapter curves the arms of the cross in one type, while in the other type the left curves are separated from those of the right and joined by a bar, and the upper left curve optionally has a line head-mark. These forms are found in the Bower MS. In the Horiuzi MS. only the simplified type of the second form is seen. In this case the right curve is straightened, and the form comes closer to that of the

Nāgarī letter. The initial *ṛī* is formed by adding a slant to the foot of the right limb. A new letter *ḷī* is also met in the last manuscript. It consists of a fish-hook upside down with the hook turned to the left. The initial *ḷī* is formed by adding a curved slant to the vertical of the first.

A I. *The Middle Ganges valley*

The palaeography of this region falls into the following chronological categories:

(a) Fourth century A.D. (Pl. X. 1).¹ The typical example of this period is the Allahabad pillar inscription of Samudra Gupta. It has been fully described in the last chapter.²

(b) Fifth century A.D. Two varieties are seen in this period:

(i) Pl. X. 2 is taken from the Karamdanda inscription of Kumāra Gupta I and the Bhitari pillar inscription of Skanda Gupta, both the inscriptions showing influence from the Mathura region. The letters have distinct head-marks, which are either notched or triangular. Of the initial vowels a fundamental change is seen in the forms of *a* and *ā*. The left limb hangs down from the triangular head and ends in a hook open to the left, instead of a curve to the right as seen in the Allahabad inscription. The middle bar joining the two limbs is generally horizontal. The long *ā* has an additional hook attached to the right limb. These forms are the real basis from which the later developments in North India took place. They are also found in the early fifth-century inscriptions of Malwa and Rajasthan.³ Henceforward this form will be called the curved *a*. The form of *i* with a vertical and two dots on the left, as seen in the Allahabad inscription, continued here, but optionally at Bhitari we have the older form consisting of three dots—a practice also seen in the Mathura region. *U* shows a definite influence from Mathura in the bending of the horizontal tip—a practice already noticed in the inscriptions of the Kushāṇa period. No other initial vowels are seen here. In the case of the medial vowels the Mathura style of the Kushāṇa period is usually followed. Both medial *ā* and *e* are top slants, but in the case of *hā* the local style of the horizontal mark is kept. The medial *o* is made of two top curved slants, one

¹ For the list of the inscriptions and references see Bibliography at the end of the chapter, p. 204.

² See above, p. 102.

³ See below, p. 156.

going to the left and the other to the right, while a vertical mark is added to them to make the medial *au*. The medial *ai* has two top slants going to the left. The medial *i* has a curve to the left while the medial *ī* has it on the right with a prominent initial mark recalling the two verticals of earlier times. The medial *u* curves its horizontal downwards, except in letters such as *thu*, *pu*, *mu*, *nu*, and *su*, in which the old practice of prolonging the right vertical continued. The medial *ū* has either an additional curved mark or a horizontal mark with bent tip attached to the right or left of the vertical. The medial *ri* curves its horizontal mark to the right.

As in the Allahabad inscription the right limbs of *ga*, *ta*, *bna*, and *śa* are longer than the left. The middle bar of *ka* is curved, while *kha* and *ga* have straight tops. The left vertical of *gha* still retains a slight curve. *Cha* is of the beaked form, while *chha* has the left loop smaller than the right. The lower limb of *ja* slightly bends down. *Na* is of the open-mouthed variety, as seen in the Allahabad inscription. The old form of *tha*, a circle with a dot, is no longer found in this region. It is changed into an oval with a mid-line—a form only used optionally in the Allahabad inscription. *Da* has its curve open to the right, while *dha* has a straight top with its lower portion narrowing to a point. *Na* is of the looped variety as seen in the Allahabad inscription. *Pa* still retains the slight curve. *Bha* is of the angular variety. *Ya* has a loop at the left limb and is of the tripartite form, but optionally has its base divided into a slanting right half and rounded left half. *Ra* is a straight vertical and *va* is triangular. *Śa* has a rounded top while *sha* has a full length mid-line.

Important differences from the Kauśāmbī style are seen in the forms of *ma*, which optionally has the half circle in place of the tail, found only in the Mathura region;¹ *la* and *ha*, which do not show the cursive hooked varieties of Kauśāmbī but have the three-limbed form with a firm base; and *sa* which has the older form with a hook on the left side in place of the looped variety of the Kauśāmbī style. All these forms are known in the Mathura region. Among the conjuncts we notice *ṅgi* and *ñchi*, the latter showing the cursive form of *ṇa*.

(ii) Pl. X. 3 is taken from the remaining inscriptions of Kumāra Gupta I, Skanda Gupta, and their successors, all of this period and found in this region. The plate is mainly based on the Bihar and

¹ See below, p. 143.

Kahaum inscriptions of Skanda Gupta. This group of inscriptions carries the Kauśāmbī style further. The head-mark is distinctly triangular, though in a few cases it seems to be only notched. The initial vowels are of the same type as described in the above group (b) (i). We also find here the form of *e* which is triangular with its base at the bottom. The medial vowels follow the styles of both the Allahabad inscription and the Kushāṇa records. But specially noticeable is the form of medial *ā* in *dhā*, which is a curved sign attached to the middle of the right limb—a feature that recalls the practice of the eastern region. The medial *ṛi* now has a proper hook turned to the right. The medial *u* curves upward in the case of *gu* (optionally), *du*, and *bhu* (optionally). In the consonants the lower tips of the verticals show a faint trace of thickening, recalling the tendency to cursive flourish associated with the pen style. Other important developments from the style of the Allahabad inscription are seen in the greater use of the flat-topped *ga*, the straightening of the curved limb of *gha*, *pa*, and *sha*, the preference for *tha* with a mid-line within the oval form, *dha* with its lower end narrowed, the angular *bha* with a triangular head at the left limb, and the looped *sa* with an acute angle at the right limb. It should be noted that the oval *tha* is vertical when used singly and horizontal when used in a conjunct such as *sthā*.

(c) Sixth century A.D. (Pl. X. 4, 5, 6). No. 4 is taken from the inscriptions of the Maukharis of Magadha. No. 5 is derived from the Amauna inscription, dated in the (Gupta?) year 232, and no. 6 from the Haraha stone inscription of the Maukhari ruler Isānavarman, dated in the (Vikrama) year 611. There is a definite change in the palaeography of this period, as attested by the new types of the initial vowels and the use of ornamental medial vowels. If the forms of the initial vowels can be relied upon, this influence can be traced from the region of Malwa. The new changes can be studied under three heads.

(i) *The general characteristics.* The head-mark in the inscriptions of the Magadha Maukharis is a thick line, in the inscriptions of the Kanauj Maukharis a solid triangle, and in the Amauna inscription a simple line. In all these inscriptions, except in the Amauna, the lower tips of the verticals show definite traces of the foot-mark.

(ii) *The new types of the medial vowels.* The important change in the medial vowels is seen in the use of the ornamental forms, as

given above. Here the pen style is clearly marked, not only in the thick and thin lines but also in the long flourishes either at the top of the letters or at the sides. The general forms are taken from both the Kushāṇa and the local systems. In the Kushāṇa style the slanting strokes of *ā* and *e* or the curved forms of *ī* and *î* lend themselves to easy flourishes. A special form is the twisted stroke of *e*, which is first seen in the eastern region¹ as early as the Susunia rock inscription of Chandravarman. The ornamentation in the inscriptions of the Magadha Maukharis is not so prominent. It should also be remembered that the simpler forms persist optionally. In the Amauna inscription only the simpler forms are found. The special curled form of the medial *î* is to be seen in the inscriptions of the Kanauj Maukharis.

(iii) *The development of new forms.* In the initial vowels there appear altogether new forms of *ī* and *e*. The initial *ī* has two dots at the top and a third lower one with a curved tail, but very occasionally has two dots below with a top line. The first form becomes henceforward the standard type in this region. The initial *e* has the base of the triangle at the top and the head below, and its left arm slightly curves to meet the point. This form leads on to the modern Nāgarī *e*. Development is also seen in the form of *a*, where the lower hook at the left limb projects its two arms beyond the vertical line. The lower curve of the initial *u* is further prolonged. But in the Amauna inscription the old form of *a*, seen in the Allahabad inscription, persists. Of the consonants, *kha*, *ga*, and *śa* have flat tops, though in the Amauna inscription rounded tops are retained. *Gha* undergoes a fundamental change by the division of its base into two halves—the straight right half meeting the upright at an acute angle and the left half curving with the left upright. This form paves the way for the North India *gha* of modern times. *ṣa* bends its lower limb still farther. The upper arm of the half-circle *ṭa* is flattened. *ḍa* also slightly bends the lower leg. *Na* henceforward has the open-mouthed form of the Kauśāmbī style, but the loop seen in the Gupta period is no longer found. Another development is seen in the inscriptions of the Kanauj Maukharis, where the base slightly slopes to the right and the outer curves are slightly prolonged. *Tha* henceforward copies the form of *dha* with an additional mid-line. *Da* has a double curve meeting at a point, the upper curve opening to the left and the

¹ See below, p. 130.

lower to the right, the tip of the last being turned up. This form will henceforward be called the double-curved *da*. The looped *na* is found here, but in the inscriptions of the Kanauj Maukharis this loop develops into a head and is joined by a bar to the right vertical. No change is seen in the forms of *pa*, *pha*, *ba*, and *ma*, except that at Amauna the old open-mouthed form of *ma* persists. *Bha* has developed a triangular head at the bottom of the left limb, but the old triangular form of *bha* is seen at Amauna. *Ya* has three types: the first is the tripartite form with an inner loop at the left limb and the base divided into a straight right half and a curved left half—a development from the Kushāṇa type; the second has an outward curl at the left limb instead of the loop, a type also seen in the eastern region; and the third is the hooked *ya* (henceforward called bipartite *ya*), seen earlier as a subscript. That it is adapted from the old form, and not a new invention, is clearly observable in the varying forms of the same type in the Haraha inscription of Īśānavarman. The new development made in this hooked *ya* is in drawing the right limb, which now becomes straight and meets the base at an acute angle. *Ra* shows prominently the foot-mark in the form of a triangle. The hooked forms of *la* and *ha* known in the Gupta period are no longer followed. The western forms with a firm base-line are used. In the inscriptions of the Kanauj Maukharis the base of *la* slants upward, while the hook of *ha* is pulled down. In these inscriptions the old form of *sa* with a hook at the left is used optionally, but usually the looped *sa* is found, with the only change that the loop tends now to become triangular. Again the triangular form of *va* shows a development in the inscriptions of the Kanauj Maukharis. This triangle optionally turns into a round form but keeps the right arm straight. This will be henceforward called the rounded *va*. *Sa* generally has a flat top with a triangular foot-mark at the left limb. At Amauna the round-top form is seen and here the mid-line stops half-way. On the whole the forms clearly show that the Magadha Maukharis were earlier in date than the Kanauj Maukharis. Another point which is clear is the introduction of the new forms from the Malwa region, and it is not unlikely that these Maukharis originally came from Malwa, where they are known earlier from the Yūpa inscriptions.¹

¹ See above, p. 92.

(d) The last quarter of the sixth and the seventh century A.D. (Pl. X. 7, 8, 9, 10, 11). No. 7 is taken from the Bodhgaya inscription of Mahānāman, dated in the (Gupta) year 269; no. 8 mainly from the Banskhera copper plate of Harshavardhana; no. 9 from the spurious Gaya copper plate of Samudra Gupta; no. 10 from the Aphaṣa inscription of Ādityasena; and no. 11 from the Deobarnark inscription of Jīvitagupta. All these inscriptions, except no. 9 (which is a simplified version but crudely drawn), show ornamental medial vowels and the *kuṭila* (bent right vertical) form of the letters. The inscription of Mahānāman marks the beginning of this style of writing in this region. This style is a further step from the writing seen in (c) above.

Of these inscriptions the Banskhera plate is the most ornamental. The development is seen in extending the curve at the left limb of the initial *a*, the bottom tail in *i*, and the lower bend in *u*. In the inscriptions of Harshavardhana the tail of *i* is turned to the left, instead of the usual right, and *e* shows a notch at the top line. In the Aphaṣa inscription the unusual form of *e* with a top stem, also known in Bengal but more common in the Western Deccan,¹ is seen. The spurious plates of Samudra Gupta show simpler forms of *a* and *e*. The medial vowels are all ornamental as seen in (c) above.

Marked evolution is noticeable in the consonants. *Ka* retains the old form with the curved middle bar in *kra*, *kṛi*, and sometimes in conjuncts, but is usually seen in the new form with the curve on the left of the vertical growing into a triangular loop and the right curve developing a downward tick, which in due course lengthens into a bent vertical. We shall henceforward use two terms, the looped *ka* for the first and the *kuṭila ka* for the second. The flat-topped *kha* prominently shows the triangular foot-mark at the left limb, and the right limb has the hollow triangle on the inside of the letter. Sometimes the angles of this triangle are rounded. In the spurious Gaya plate this triangle is at the outer side of the right limb and here it opens its mouth, as in the inscriptions of the Pālas of Bengal.² *Ga* has both flat and round tops, the latter gradually merging with the *kuṭila* form of the right limb. In *gha* the acute-angled side is lowered and the curved side slightly raised. *Cha* is still of the beaked type, but is drawn in an ornamental style. *ṣa* merges the uppermost arm with the head-mark, the middle arm is curved downwards, and the lowest bends into a hook, the

¹ See below, p. 166.

² See below, p. 135.

whole giving a new look to the form. *ṣha* still maintains the old form, with only this difference, that the middle bar slopes down to make an acute angle with the right limb. There is no change in *ṭa* and *ṭha*, but *ḍa* reduces considerably the length of its lower leg and its back is slightly rounded. The base of *ṇa* is slanted and the outer arms prolonged, but the two inner uprights come closer, and in conjuncts such as *ṇḍa* they actually merge together and form a tooth in the cursive type. In *tha* and *dha* the left curve slopes down beautifully to meet the bent vertical at the narrow end. Henceforward these will be called the bulged forms. The mid-bar of *tha* gradually shifts upwards. The double-curved *da* now has a tick at the tip of its lower curve. The head-form of *na*, as seen before, is now well established, but the right vertical now shows *kuṭīla* features. *Pa* rounds its left corner and lowers its right vertical to meet at an acute angle with the base. Only in the inscriptions of Harshavardhana is its ornamental form to be seen. It is from this time onwards that the separate sign for *ba* is dropped and only *va* is used for both the consonants. The triangular foot-mark in the left limb of *bha* now grows in importance, displacing the left limb itself, but the right is further lengthened. In the Deobarnark inscription the triangle is open. The tail of *ma* disappears and a loop develops at this point, while the base slopes down to meet the right vertical at an acute angle. *Ya* is of the bipartite form with the right vertical bent, but the Bodhgaya inscription of Mahānāman still optionally has the left loop in the tripartite form. *Ra* develops a tail at the foot-mark. The base of *la* curves upwards, with its left hook developing a beautiful inner bend. The rounded *va* with the right vertical forming a tail is also seen here. The flat-topped *śa* takes on a new form in the inscriptions of the later Guptas. Here the top of the left limb curls into a loop and is then finally joined with the right limb. *Sha* follows the form of *pa* with an additional mid-line. *Sa* with the triangular loop, as seen before, is adopted here. Only as an optional usage is the type with the left hook seen in the Bodhgaya inscription and the spurious Gaya plate. In the inscriptions of the later Guptas this triangle opens. The base of *ha* curves and dips its angle at the right. In the late inscriptions a tail develops at this point, while the hook on the right falls in a graceful bend.

It may be noted that in the inscriptions of Mahānāman the *kuṭīla* forms are not uniformly followed. They are invariably found

in the inscriptions of Harshavardhana. The spurious Gaya plate is nearer in date to the inscriptions of the later Guptas, which are a step forward in the development of the *kuṭila* forms. The Deobarnark inscription shows a few remarkable forms not seen in the earlier inscriptions. The plates¹ of the time of Śaśāṅka, dated in the (Gupta) year 300 and the Cuttack Museum plates² of Mādhavavarman, dated (Harsha) year 50, are in the style of the seventh century, but the medial vowels used there are not very ornamental.

(e) Eighth century A.D. (Pl. X. 12). The typical example is the Nalanda stone inscription of Yaśovarman, which marks an advance towards the evolution of proto-Nāgarī. The change is observable in the tails seen in *a, i, e, kha, cha, ja, tha, da, dha, pa, ra, la, va, sha*, and *ha*. The medial vowels have become almost standardized, with the exception of *ā* and *o*, which still optionally retain the old forms. In them the blending of the Kushāṇa and the eastern styles is now complete. Easily recognizable Nāgarī forms are *ka, kha, ga, cha, ja, da, na, pa, la, va*, and *sha*, with the only differences that here the head-marks maintain the triangular form and that the right limbs are bent. An important development is seen in *tha*, which makes a definite inner loop at the top of its bulged body and thus disposes of the mid-line. The main difference between this style of writing and the Nāgarī is that this inscription keeps up the taste for ornament, while Nāgarī prefers straight lines, and this style is first seen in Central India.³

A II. Eastern India

As we have seen, the style of this region falls into two sub-sections, (a) Bengal, and (b) Nepal. We will first deal with Bengal.

(a) Bengal

Though the writing style of this region is derived from the Middle Ganges Valley, it has certain characteristic peculiarities. The Kauśāmbī style is seen as early as the Susunia rock inscription of Chandravarman, which is better executed than the Allahabad inscription of Samudra Gupta.⁴ The medial vowel *ā*, applied to the bottom right of *ṇā* in both these inscriptions, survives later

¹ *Epigraphia Indica*, vi. 144-5.

³ See below, p. 164.

² *Ibid.* xxiv. 151-3.

⁴ See above, p. 101.

only in Bengal, and this practice is further extended to *khā*, *gā*, and *bā*. The twisted slant in the medial vowel *e* and the curled form of the medial *i* appear here from the beginning, suggesting that ornamentation in the medial vowels first appeared in Bengal, and it is not unlikely that this twisting of the medial vowels led subsequently to the bending of the right verticals (i.e. *kuṭila* forms). Another practice already noted in the last chapter is the confusion between *sha* and *sa*, which resulted in the total dropping of the form of *sha* in the fifth-century copper plates of Bengal. Only dental *sa* was used for both. In all subsequent records in Bengal *ksha* is formed by combining *ka* with *sa*. Another confusion arose between *ba* and *va*, both of which are even today pronounced as *ba* in Bengal. This led to the dropping of the form of *ba* from the close of the sixth century onwards. It is probably from this source that similar confusion in these letters spread in the other regions. From the palaeographical point of view it is important to note that the style of Bengal does not have the foot-mark, though influence from the Middle Ganges Valley is clearly seen in the thick heads at the left limb of *ra*, *kha*, *ga*, and *śa*. The letters *bha* and *sa* do not have the solid triangular foot-mark at all. They show directly the open-mouthed triangle at this point, as is seen in *kha* of the Pāla period. The palaeography of this region falls into six chronological groups:

(i) Pl. XI. 1 is taken from the Susunia rock inscription of Chandravarman, the palaeography of which has been fully described in the last chapter.¹ It is well executed on stone. The medial vowels, such as *e* and *i*, already show ornamental bending. King Chandravarman is generally identified with his namesake defeated by Samudra Gupta. If this is accepted, the inscription may be taken as the basis for palaeographical study in Bengal. As this inscription has a definite stylistic relation to the next group in Bengal, on palaeographical grounds it may be reasonably placed in the fourth century A.D.

(ii) Pl. XI. 2 represents the writing in the copper plates of the time of Kumāra Gupta I and Budha Gupta, dated between the (Gupta) years 113 (A.D. 432) and 163 (A.D. 482). The change of the writing material makes for the stylistic difference from (i) above. The Susunia rock style shows firm angular lines but the

¹ See above, p. 101.

style as known from these copper plates may be termed 'fugitive', implying three things: (i) looseness in drawing the lines on the part of the writer; (ii) a tendency to curve the angles, as in *pa* and *ma*, and (iii) a preference for extremely cursive forms, as in *la* and *ha*. As a result of the first feature the head-mark becomes a mere line. No attempt is made to give the letters their full forms. This defect is obviously due to the metal worker who incised the inscriptions on the plates rather than to the scribe himself. As far as it is possible to get at the latter's hand, there does not seem to have been any deliberate attempt to deform the letters.

The initial vowels *a*, *ā*, *i*, *ī*, and *e* are similar to the forms seen in the Gupta inscriptions of the Middle Ganges Valley. But the base of *u* already has a curve downwards, and an optional form of *e* has an upper stem, as has been noted in the inscriptions of the later Guptas.¹ The difference from the Middle Ganges Valley form is also seen in the medial *o*, as applied to *kho*, *go*, *no*, *bo*, and *yo*, where the right-hand mark is given at the bottom right, as in the case of the medial *ā*. The medial *au*, as applied to *tau*, also shows a variation in so far as the third mid-stroke is actually inclined to the left. The Kushāṇa system of a top slant for the medial *ā* is not found here, but it is seen in the case of the medial *e*. The medial *i* is a curve going to the left, and the medial *ī* has two arms in a curve, the right one longer than the left. There is no change in the other medial vowels. The left limbs of *kha*, *ga*, and *śa* have line heads instead of foot-marks, while the right limbs of *ga*, *ta*, *bha*, and *śa* are longer than the left. *Ka* has the curved mid-bar and *gha* maintains the straight base. *Cha* has pointed as well as rounded beaks. *ṣa* has its lower arm slightly bent at the tip. *Ña*, as seen in the conjuncts *ñcha* and *jña*, has already developed the cursive form with three teeth. *Ṭa* flattens its top, and *ḍa* has its back slightly rounded. *Na* is of the open-mouthed type with a loop at the left. *Tha* is oval with a mid-line. *Na* is of the looped variety. *Pa* and *pha* have rounded left angles, while *ba* optionally has a slight bend at the left arm. *Bha* keeps up the angular form. *Ma* has two varieties in the tailed form—in the first the base slopes to the right vertical, thus giving the first example of an acute angle in this letter, while the second is a constricted form in which the base curves upwards and replaces the right vertical. This method is also adopted for drawing the letter *pa*, which gives a shape

¹ See above, p. 127.

closer to the later proto-Bengali *pa*. *Ya* is of the tripartite form with a loop at the left arm. *Ra* is a straight vertical. *La* and *ha* are of the hooked type but very cursively drawn, especially in the Baigram plate. In this plate alone we get the letter *la*, of the same form as in the Allahabad inscription. The base of the triangular *va* has already started sloping to the right. As said before, *sha* is replaced by the form of *sa*, and the latter is of the looped variety.

(iii) Pl. XI. 3 represents the writing known from two late Gupta copper plates and five copper plates of Dharmāditya, Gopachandra, and Samāchāradeva—all belonging to the sixth century A.D. A study of these inscriptions shows a transition from the Gupta style noted in the second group to certain new features which reached their maturity in the later half of the sixth century A.D. To this last period belongs the Ghughrahati copper plate of Samāchāradeva. The two Gupta copper plates link this group with (ii) above, and the inscriptions of Dharmāditya and Gopachandra fall in between. Palaeographically the inscriptions of Dharmāditya show earlier forms, as has been rightly noted by F. E. Pargiter in his edition of the plates. The difference can be marked not only in the form of *ya*, as was maintained by Pargiter, but also in the forms of *a*, *tha*, *dha*, *pa*, *la*, and *ha*. The inscriptions of Dharmāditya use the sign for *ba* but do not have *sha*, as was the practice in (ii) above, but the inscriptions of Gopachandra have only the sign for *va*, and the Mallasarul inscription at least contains the form of *sha*. But this last plate mentions the name of Mahārāja Vijaya-sena, who is identified with his namesake mentioned in the Gunaighar plate of Vainya Gupta. Hence Gopachandra is generally taken to be a successor of Vainya Gupta, though the palaeography suggests that Dharmāditya should come between them. But this point need hardly be pressed further, when it is realized that by about this time greater changes had already taken place in the forms of the letters in the neighbouring province of Bihar, as attested by the inscriptions of the Magadha Maukharis. As the same change was to affect Bengal, it is hard to be dogmatic as to the exact time when the change started here. We must allow a margin for the transition period in which the new and old forms were used simultaneously, some inscriptions preferring the new and the others the old. The lesson must be learnt that the palaeography is of little help in settling the question of the succession of rulers when only a short duration of rule is involved.

In all these inscriptions the head-mark is distinctly given. The Gupta form of *a* appears in the plates of Dharmāditya and used optionally in the plates of Gopachandra, but in the later plates the curved form of *a* is seen, as in the post-Gupta records of the Middle Ganges Valley. The initial *i* maintains the Gupta form, but *u* extends its curve upwards. The triangular *e* still has its base at the bottom. Only in the Ghughrahati plate is the base on the top. Only two medial vowels show change: the medial *ā* optionally uses the top slant of the Kushāṇa style, and the medial *i* prolongs its curve to the bottom of the letter. The medial *u* in *tu* is turned down, but in *gu*, *du* and *bhu* it is turned up. *Kha* has both round and flat-topped forms. *Gha* now divides its base into a sloping right half and a curved left half. *Na* drops the loop at the left of the open-mouthed form. *Tha* maintains the oval form in the inscriptions of Dharmāditya, but the bulge form is seen in the other plates. Both *pa* and *ma* show an acute angle at the right. *Ya* has a new tripartite form with the outward curl at the left arm, as seen in the Amauna plate,¹ while the old looped form also occurs. In the plates of Gopachandra the bipartite *ya* appears. *Ra* optionally has an upward slant, recalling the foot-mark. Both *la* and *ha* have the hooked varieties in the earlier inscriptions, and in the later ones we have the full forms with the firm base line. *Sa* optionally has the triangle instead of the loop at the left. Among the conjuncts may be noted the forms of the double letters *ṭṭa* and *rjju*, in which the lower letters are twisted downwards. Similarly, *tha* in *sthā* has its oval in a horizontal position. On the whole the style suggests the gradual adoption of some of the forms which were already in use in Bihar.

(iv) Pl. XI. 4 is taken mainly from the Nidhanpur copper plate of Bhāskaravarman, but the Tippera plate of Lokanātha and the Kailan plate of Dhāraṇa Rāta have also been consulted. These inscriptions fall in the first half of the seventh century A.D. Many of the features seen in the Middle Ganges Valley at this time are found here. The head-marks are solid triangles. The right verticals are bent (*kuṭīla*), but on the whole the ornamental forms are meagrely used.

The form of *a* is of the curved type but develops an eastern variety by sloping the middle bar and lengthening the right vertical. The other initial vowels adopt the Middle Ganges Valley forms. For the medial *ā* the curved mark at the right bottom of the

¹ See above, p. 126.

letters is now given up. The medial *i* has its curve going to the left and the medial *ī* to the right. The medial *u* in *du*, *bhu*, and *ru* is curved downwards. *Ka* adopts the looped variety from the Middle Ganges Valley. *Tha* and *dha* show a definitely bulging body. *Da* is of the double-curved type with a tick at the lower curve. *Na* also adopts the head form of the Middle Ganges Valley. *Pa*, *pha*, and *ma* all have the acute angle at the right. *Bha* still maintains the angular form. The *kuṭila* form of the bipartite *ya* is used here. *Ra* has a triangular foot-mark. Both *la* and *ha* have firm bases and develop their hooks in a downward curl. *Va* maintains the triangular form with its base sloping. *Sha* is used with a mid-line in the form of *pa*. *Sa* has the triangular loop. *Jha* is used in combination with *ja* and has an acute angle on the right. The *halanta* (vowelless consonant) is shown by a short slant below the letter as in *kāt*.

(v) Pl. XI. 5 is derived from the inscriptions of the Khadga dynasty, which ruled in East Bengal in the later half of the seventh century A.D. Here fully developed *kuṭila* forms are used. The initial vowel *a* maintains its eastern variety by extending the left curve upward. Other vowels are similar to those used in the Middle Ganges Valley. The medial *ā* now develops a short vertical line on the right of the letters. The medial *i* and *ī* are extended to the bottom of the letters. The medial *ū* has a new form. It consists of a stroke with a head and is added to the left of the vertical at the bottom of the letters. This form is also seen in the Middle Ganges Valley, and it survives in modern Bengali. But in the cases of *bhū* and *śū* an additional curve is added to the medial *u*. In the consonants some changes are noticeable. In *gha* the acute-angled side is extended slightly downwards, and the curved side is slightly tilted upwards. *Cha* has a sharp pointed beak. *Ja* adopts the curved form from the Middle Ganges Valley, in which the upper limb merges with the head-mark. *Ṭa* develops a tick at the end of the flat top. *Na* has a sloping base and the two outer arms are longer. *Tha* and *dha* are of the bulged form, with the former developing an inner loop. *Da* bends its tick at the end of the lower curve. *Bha* and *sa* open their triangular mouths. The acute angle in *pa*, *ma*, *ya*, and *sha* is very sharp, and their right limbs are prominently bent. *Ra*, as adopted from the Middle Ganges Valley in the earlier period, develops a tail at the foot. The base of *la* curves upwards and its hook shows an inner curl. *Va* is of the rounded type. *Sa*

shows a loop in place of the rounded top and a slanting bar to connect it with the right vertical. *Ha* curves its sides in an ornamental bend with its right hook falling in a beautiful curl.

(vi) Pl. XI. 6 mainly represents the Khalimpur copper plate of Dharmapāladeva and the two newly discovered Sālban Vihāra plates of Bhavadeva.¹ They have been selected to represent the typically Bengali style of the time. If we base our conclusions on the Mungir copper plate of Devapāla, we can hardly trace any difference from the contemporary writing of the Middle Ganges Valley. It was certainly due to the Pālas that many discrepancies between the styles of Bihar and Bengal were removed. The Bengali style is still preserved in the form of the initial *a*, which shows an extended curve at the left limb. The other form given in the plate is from the Mungir plate. The initial *ā* has now a vertical on the right of *a*, as is also the case in the medial *ā*. The medial *i* has two dots above and a tailed one below, but another form with a curve above two dots is also seen. The latter form is probably borrowed from Central India. *U* extends its curve upwards. The rare *au* is formed by adding an upward curve on the right to the middle of *o*, which has its base bent down and the angles rounded. *Kha* has two forms—one with an inner triangular loop, and the other with an outer triangle with its mouth open and joined to a vertical on the right by a bar. This latter form of *kha* is used in the spurious Gaya plate of Samudra Gupta.² *ṣa* bends the middle arm downwards and curves the lowest arm still farther, while the top one is merged in the head-mark. *ṭa* prolongs the right hand tick downwards, and *ṭha* has a head-mark, from which hangs the circular form. *ḍa* has a curved back and a bent leg. *ṇa* develops the cursive form by merging the two middle arms and reducing their length—a form already seen earlier in such conjuncts as *ṣṇu*. *Ta* has also two forms—one with two arms rounded, as in the older inscriptions, and the other with the left arm forming an angular hook and finally attached to the right vertical—a form seen in the proto-Nāgarī style. *Tha* is of the bulged form with its loop turned either inwards or outwards. Similarly, *pha* has its loop turned outwards. *Ra* develops a cursive variety of the tailed type and has a bent vertical on the right with a mid-bar on the left. Besides the round-topped form of *śa*, we have also the looped

¹ These plates are in the possession of the Director of Archaeology, Karachi, Pakistan.

² See above, p. 127.

form as seen in the last group. In the conjuncts the form of *ñchi* is remarkable, as *ña* shows a cursive form almost identical with that of modern Bengali. The conjuncts *kshmī* and *ksha* also come closer to the modern forms. Other letters and the medial vowels are only one stage further developed than those seen in (v) above.

On the whole the style of writing in Bengal starts with certain peculiarities of its own, but later is gradually brought closer to that of the Middle Ganges Valley. Only a few letters point towards the modern Bengali, and as a whole proto-Bengali has not developed. In fact proto-Nāgarī invaded this region and it was long before its influence disappeared and a local style quite distinct from that of the Middle Ganges Valley was evolved.

(b) *Nepal*

The inscriptions of Nepal were originally published by Bhagwanlal Indraji.¹ To these Bendall added others,² and later Sylvain Lévi³ republished the inscriptions. Finally, in 1956 Gnoli brought out a well-illustrated monograph on Nepalese *Inscriptions in Gupta Characters*. Most of these inscriptions are dated. One of the eras easily recognizable, and generally accepted, is that which is associated with the name of Harsha. There has been great controversy regarding the other era used in them. Fleet in his *Corpus*⁴ argued for the Gupta era, but Lévi proposed a new Nepali era starting in A.D. 110. The root of the controversy lay in Bendall's inscription no. 1, in which the date was read as 316 or 318. This inscription mentions the name of Śivadeva I, who is known to have been a contemporary of Aṁśuvarman. The latter's inscriptions are dated in the Harsha era (starting from A.D. 606) and range between 34 and 48. Quite naturally Bendall's date was referred to the Gupta era (beginning c. A.D. 318-19). This reference upset the date of other Nepalese kings such as Mānadeva, whose inscriptions are dated from the year 386 onward. Fleet referred all these dates to the Gupta era. But this is impossible on palaeographical grounds as the details given below will show. Hence Lévi proposed a new era for the Mānadeva group of kings. But such an assumption is not now necessary. Gnoli has corrected Bendall's reading of the date

¹ *Indian Antiquary*, ix. 163 ff.

² *A Journey of Literary and Archaeological Research in Nepal and Northern India*, Cambridge, 1886.

³ *Le Nepal*, vol. iii.

⁴ Fleet, *C.I.I.*, iii. 95-97 and Appendix IV.

from 316/18 to 517, thus we have inscriptions regularly following a set era and later passing on to the Harsha era. There is no break in the palaeography, of which the gradual evolution is clear. The palaeography favours the attribution of the earlier years to the Śaka era (starting in A.D. 78). As no known historical events are against this attribution, the following palaeographical study is made by grouping the inscriptions in the sequence as we see them.

The inscriptions of Nepal fall into five chronological groups, beginning with the (Śaka) year 386 and ending with the (Harsha) year 159. But for our purposes they are divided into three categories.

(i) Pl. XI. 7 includes the inscriptions dated between the (Śaka) years 386 and 427, and Pl. XI. 8 has the inscriptions ranging between the (Śaka) years 428 and 516. Roughly speaking, no. 7 belongs to the later half of the fifth century A.D. and no. 8 to the sixth century. The manner of writing is doubtless derived from the Kauśāmbī style of the Gupta inscriptions, as the analysis of the main body of the letters will show, but the medial vowels agree with the system known from the fifth-century copper plates of Bengal. It seems therefore probable that this Kauśāmbī style reached Nepal through Bengal. But the Nepalese inscriptions have an individuality of their own quite distinct from that of Bengal. This is clearly marked in the manner of using the broad pen. In all the inscriptions in Nepal the head-mark is a well-formed solid triangle, but the Bengal copper plates show a line mark, and only the later writing has triangular heads. Again in Nepal the verticals show a definite foot-mark from the earliest inscriptions to the latest, but in Bengal it is absent. As in the inscriptions of Bengal, the Kauśāmbī style is continued here to the end of the sixth century A.D., and in fact in Nepal it survives even later, though in the Middle Ganges Valley the Western influence came in the beginning of the sixth century A.D. This Western tendency in some letters is seen in Nepal very vaguely in the first half of the seventh century A.D., but more definitely from the later half of that century. Again the ornamentation follows the style of Bengal rather than that of the Middle Ganges Valley.

The initial vowels *a*, *ā*, *i*, and *e* are of the Kauśāmbī style. The verticals of *a*, *ka*, and *ra* have the foot-mark. All the medial vowels, except long *i*, follow the Bengal style of the fifth century A.D. The

most important to note is the medial *ā* in *khā*, *gā*, *ṭhā*, *ṇā*, *thā*, *dhā*, and *bā*, in which a hook is added to the lower right of the letters. This practice continued in Nepal in the case of *bā* even in the sixth century A.D. Nepal has the curve of the medial *i* to the left and that of the medial *ī* to the right from the earliest inscriptions, but in Bengal this practice started in the seventh century A.D. From the sixth century A.D. the curve of the medial *i* is extended to the bottom of the letter. Of the consonants the longer right limbs of *ga*, *ta*, *bha*, and *śa* are common to other styles in North India and similarly these letters, except *bha*, have triangular heads at the left limbs. But in Nepal the flat-topped *kha*, *ga*, *ṭa*, and *śa* are common from the beginning and the round-topped forms lost favour after the fifth century A.D. *Gha* has a straight base in the fifth century, which is divided into a straight right half and a curved left half from the sixth century onwards. *Cha* is of the beaked type, while *chha* in the conjuncts is of the double-looped form. *Ja* has its vertical slightly bent and its lowest right arm curves at the tip. In conjuncts such as *ñja* the letter *ña* is cursively drawn and *ja* is slightly tilted. In the fifth century the open-mouthed type of *ṇa* has a loop on the left, but from the sixth century onwards this loop is given up. *Tha* is oval with a mid-line in the fifth century, but in the sixth it is almost oblong with a flat top. In conjuncts such as *sthu* it lies horizontally. *Da* develops an upward slant at the tip of the curve in the sixth century, while *dha* is oblong in the fifth but in the sixth narrows towards the bottom. *Na* is of the looped type. The left corner of *pa* is rounded, but it has a definite angle on the right. The left arm of *ba* is bent, while *bha* is of the angular form with a foot-mark at the left limb. *Ma* is of the tailed variety. *Ya* is tripartite with a loop at the left arm, but optionally divides the base line into a sloping right half and a curved left. The other characteristic *ya* of Nepal has an outer curl instead of the loop at the left arm—a form also seen in Bengal in the sixth century. In the photographs published by Gnoli this form appears in the inscriptions of Nepal in the fifth century, but in the reproduction of the same inscriptions by Bhagwanlal Indraji the loop is found in place of the curl. As this is a doubtful case, it has not been shown in the plate. If the curl is really present in the fifth-century inscriptions, this is its earliest occurrence in India. Both *la* and *ha* are of the hooked type. The base of the triangular *va* slightly slopes to the right. The hooked type of *sa* is found, but

in some cases the loop is triangular. Of the conjuncts, *ngha* and *ṇḍa* take the usual form. Cursive forms are seen in *hla* and *tp̄ra*. The cerebral *sha* is not used in Nepal until the middle of the seventh century A.D. Though Gnoli transliterates in the correct grammatical fashion, actually the form of *sa* serves the purpose of both, as is seen in the conjuncts. In the sixth century A.D. the lower *ṭa* in the conjunct *ṭṭa* is turned on one side, with its mouth downwards, as was also the practice in Bengal.

(ii) Pl. XI. 9. This group includes the inscriptions, dated between the (Śaka) years 517 and 535 and up to the (Harsha) year 59. Roughly speaking, the inscriptions belong to the first half of the seventh century A.D. During this period of the rule of Harshavardhana in the Middle Ganges Valley new trends from that region reached Nepal. But no sudden changes were made. This group really represents the transitional stage leading on to the next (iii). In this period the only change in the initial vowels is seen in the form of *e*, which from this time onwards has a flat top—a practice in line with that of the Middle Ganges Valley. In the medial vowels the hooked form of *ā*, as seen in some cases before, is now dropped. The system known in Bengal at this time is now followed. *ṣa* optionally has the new form, in which the upper right arm is merged with the head-mark and the two lower ones are bent down. *ṭa* has a tick at the right end of the flat top. *ḍa* has a rounded back and a bent leg. The base of the open-mouthed *ṇa* now slopes to the right, while the two outer arms are extended farther. In both *tha* and *dha* the left-hand curve is optionally wavy. *Na* is still of the looped type. *Pa* and *ma* have an acute angle, while *bha* has now a triangular foot-mark at the left limb. The tripartite form of *ya* has both a curl and a loop at the left arm. *Ra* has the foot-mark. The hooked types of *la* and *ha* now develop a round-based form, and optionally are also of the new forms from the Middle Ganges Valley, having a firm base and two verticals with a hook. *Sa* has a triangular loop at the left, and in rare cases opens its mouth. *Va* is optionally of the rounded type but also of the triangular form. The cerebral *sha* is still not used. The palatal *śa* is of the old type.

(iii) Pl. XI. 10, 11. No. 10 includes the inscriptions dated between the (Harsha) years 60 and 95, and no. 11 those between the years 103 and 159. It is from this period (i.e. the later half of the seventh century A.D.) that the forms associated with the *kuṭila* character in

the Middle Ganges Valley influence the style of writing in Nepal. But here the local forms were not altogether given up. They survived to the end of this period. Changes are noticeable in the initial vowels. The form of the curved *a* connects it with Bengal, where the lower curve at the left limb is extended farther. The form of *u*, as seen in no. 11, with a rounded vertical and upturned base, preserves an old type and is peculiar to Nepal. Similarly, the old form of *e* with its base on the right is a very late survival. The medial vowels optionally preserve the old style, but the new tendency is also seen in the addition of a vertical on the right for the medial *ā* and the prolongation of the curves in the medials *i* and *ī* to the bottom of the letters. *Ka* develops an additional right limb attached to its cross-bar, and in no. 11 has the triangular loop at the left. In the eighth century A.D. *kha*, *ga*, *bha*, and *śa* have triangular foot-marks at their left limbs, and their right limbs are slightly bent. At this time the triangle of *bha* and *sa* opens its mouth. *Gha* develops the acute-angled form farther. *Ja* is of the old three-armed form, and also the new form with its two bent arms. *Ta* prolongs its right tick farther down and *ḍa* farther rounds its back. The base of *ṇa* slopes and the outer right arm is bent, but no cursive form is used even in a conjunct such as *ṇḍa*. *Da* develops a tail at the end of the lower curve. Both *tha* and *dha* keep up the local forms, with a wavy curve attached to the right vertical, and also are of the new bulged forms. *Na* preserves the looped type, but in the eighth century A.D. we find the form with a head on the left joined by a bar to the right vertical. Both *pa* and *pha* are found in *kuṭila* forms, but in the eighth century A.D. *pha* turns its loop outwards, as was also the case in Bengal. *Ya* is of the tripartite form with a curl at the left arm, but the looped variety comes to an end in the seventh century A.D., and the bipartite form begins to appear at this time. *Ra* has the triangular foot-mark but does not develop a tail. Both *la* and *ha* have firm bases with their hooks falling in an inner curl, as in the Middle Ganges Valley. *Va* is of the rounded type. *Śa* keeps up the old flat-topped form to the end. The cerebral *sha* appears in the later half of the seventh century A.D. The dental *sa* has the triangular loop and sometimes opens its mouth. On the whole we find the older forms persisting as optional cases in the medial vowels, and in the letters *a*, *i*, *ja*, *tha*, *dha*, *na*, *bha*, *ya*, *ra*, *śa*, and *sa*. In this survival of the older forms Nepal maintains its individuality.

A III. *Mathura and the north-western region*

The palaeographical chart (Pl. XII) is prepared from the writing on (a) stone or rock (nos. 1, 2, 6, 7, and 9), (b) the iron pillar (no. 3), (c) copper plates (nos. 4, 5, and 8), (d) palm-leaf (nos. 10 and 12), and (e) birch-bark (no. 11). The technique of writing on each was different. On stone and rock the letters were in the last stage engraved with the help of a chisel. The engraver probably incised the lines drawn beforehand by the scribe. The plates could not be prepared in this fashion because of the nature of the material. The engraving on the plates must have been executed by the metal worker. The same technique was probably employed in the case of the iron pillar. For palm-leaves and birch-bark a broad or edged pen was used by the scribe, who wrote in ink. Here the proper style of the writer is visible. The copper plates¹ are at best faithful engravings of the original letters, but the metal worker may have contributed his own element to the writing irrespective of the graving tool used by him. Similarly, the engraver on stone or rock may have missed the details natural to the pen style. Hence there are bound to be differences in the styles of writing dealt with in this section. But there is one common element in all these writings, the original copy of the scribe, which was the determining factor in giving particular shapes to the letters. The engraver or the metal worker would not create new forms of the letters, but would only distort the given forms to suit his graving tool. It is therefore hardly necessary to assume a 'hieratic' style for the inscriptions and a 'literary' one for the manuscripts, unless we have definite evidence for a particular set of inscriptions. The writers had a common style and in general they must have followed the practice of the day, except for their individual mannerisms. Therefore I do not accept the opinion of Bühler, given in his 'Remarks on the Horiuzi Palm-Leaf MS.'² and Hoernle in connexion with the Bower MS.,³ that 'the masons who incised the inscriptions, or the writers who wrote the originals from which the masons copied,

¹ The technique of heating the copper plate for writing is adduced from the following verse occurring in the Nidhanpur copper plate:

Śāsana-dāhād-arvāg-abhinava-likhitāni bhinna-rūpāṇi
Tebhyo aksharāṇi tasmānn-aitāni kūṭāni.

'Because, after the burning of the plates, these newly written letters are of different form, therefore they are not forged.'

² Max Müller, *op. cit.*, pp. 90-91.

³ *Indian Antiquary*, xxi. 29-45.

tried to make the characters archaic'.¹ I believe that the manuscripts and the inscriptions follow the current styles of writing, though between them there may be stylistic differences due to the technical reasons already mentioned or to the writers' particular mannerisms. These differences can be detected, and it is hardly necessary to give priority to the manuscripts over the inscriptions in date.²

On stylistic and chronological grounds the writing is divided into the following groups:

(a) *The Mathura school of the Gupta period* (Pl. XII, 1, 2, 4, and 6)

No. 1 is taken from the Mathura inscriptions of Chandra Gupta II. The style has been fully described in the last chapter.³ No. 2 is derived from the Mathura inscriptions of Kumāra Gupta, dated in the (Gupta) years 113 and 135. It is in the same style as no. 1, but a few new forms are seen. The head-mark is a solid triangle and in some cases the foot-mark is also observable. No. 4 is taken from the Indor plate of Skanda Gupta, dated in the (Gupta) year 146. It represents the copper-plate style of Mathura. Here the head-mark is a simple line and no foot-mark is seen. No. 6 is derived from the Kura stone inscription of Toramāṇa. It shows the developed forms of the Gupta period. The head-mark is a small triangle but no foot-mark is seen.

The initial vowels *i*, *e*, and *o* are of the same forms as the Middle Ganges Valley, but *a* has two regional varieties—one, seen in the Kumāra Gupta inscriptions and ultimately traceable from the Kushāṇa form of this region, was termed in the last chapter the 'angular' type.⁴ The Gupta form shows a development in curving the upper end of the left limb outwards, placing a head-mark over the right vertical, and thickening the left bottom angle into a triangular knot. This form will be henceforward called the angular form with a knot. The other variety of *a* is seen in the Indor plate and the Kura inscription. Here the left limb makes a double curve, outwards at the upper end and inwards at the lower. This is the regional variation of the Gupta form influenced by the first variety. The vowel *ū* in the Kura inscription has a fully developed curved base. The medial vowels follow both the Kushāṇa and the eastern system, as is seen in the forms of *ā* and *e*, but the medial *o* and *au*

¹ *Indian Antiquary*, xxi. 30.

³ See above, p. 104.

² See below, p. 151.

⁴ See above, p. 86.

are given always in the Kushāṇa style. The right hook for the medial *ā*, as seen in Bengal and Nepal, is not found here at all. The medial *i* has its curve to the left, and in some cases is extended to the bottom of the letters, and the medial *ī* has its curve turned to the right. The medial *ṛi* follows the North Indian fashion of a hook turned to the right.

Ka has its cross-bar bent. *Kha* has a rounded top, but *ga* optionally has a flat top. *Gha* maintains the straight base, and *ṇa* in conjuncts merges the top line with the head-mark. *Cha* is of the pointed beaked type, but the point gradually moves upwards. *Chha* maintains the double looped type and *ja* has three right arms branching from the vertical. *Ṇa*, as seen in the conjunct *ṇcha*, is not found in the cursive form. *Ṭa* emphasizes the flat top, and in conjuncts such as *ṭta* it keeps its correct form, just as *ja* does in *jja*, and no twisted form is seen as in the eastern region. *Da* has a short hook appended from the tip of the curved back. *Na* has three varieties—the old Kushāṇa type resembling an italic *Œ*, the open-mouthed *ṇa* of the Kauśāmbī style but without the loop at the left, and a development from the first type. In this last variety the lower curves are joined together to form a thick line. This is the cursive form of the Kushāṇa *ṇa* and must be distinguished from the cursive form of the open-mouthed *ṇa*, which developed later in the Middle Ganges Valley. The two arms of *ta* meet, sometimes at an angle and sometimes in a curve. *Tha* is an oval with a mid-line. In conjuncts such as *sthi* the oval lies flat. *Da* is of the double-curved form, and *dha* narrows its lower end. *Na* keeps up the regional form with a curved base. *Pa*, *pha*, *ba*, and *bha* all have the angular forms. Only in the Kura inscription *pa* develops an acute angle, and in the Indor plate *ba* has its left side curved. The open-mouthed *ma* is seen in two varieties—the tailed one is more usual, but another with a half circle in place of the tail is found in the Kumāra Gupta inscriptions. *Ya* is of the tripartite form with an inner loop at the left arm. *Ra* is a straight vertical. Both *la* and *ha* have firm bases, two verticals and a hook. In the Kura inscription the base of *ha* is rounded, and optionally also has a notch. *La* maintains the form of Kushāṇa times. *Va* is generally triangular but in a few cases the angles are rounded. *Sa* has both the rounded and the flat top, and has a triangular foot-mark at the left limb, as in *ga*. In the Kura inscription the foot-mark is replaced by a curve turned to the left. *Sa* is of the hooked

type, but in the Kura inscription the loop is seen in place of the left hook and in another variety the mouth of this triangular loop opens out, a type probably derived from Central India.¹ Other varying features of this inscription probably came from the same source. On the whole these inscriptions keep up the regional differences from the Middle Ganges Valley.

(b) Pl. XII. 3 is taken from the Mehrauli iron pillar inscription of Chandra. The execution of the letters on the pillar is superb. Each letter has been boldly brought out, and the writing, if it truly portrays the scribe's hand, is inclined to over-emphasize the angularity. The head-mark as well as the verticals are thick-lined. If these special features are borne in mind, it is not difficult to place the inscription in time and area. No initial vowels are known from this record. The medial vowels follow only the Kushāṇa system, as they easily lend themselves to ornate forms, noticeable particularly in the up-curved form of the medial *i*, and in the rectangular head added to the long vertical of the medial *ī*. The right limbs of *ga*, *ta*, *bha*, and *śa* are longer than the left, as in all the inscriptions of the Guptas. Similarly the left limbs of *kha*, *ga*, and *śa* have triangular foot-marks, and the tops of these letters are flat. Identical with the Middle Ganges Valley forms are the open-mouthed *na*, with a loop at the left, the looped *na*, the tailed *ma*, the hooked *la*, the looped *sa*, and the hooked *ha*. The presence of so many forms from the Kauśāmbī style definitely proves that the writer of this inscription came from the Middle Ganges Valley. The forms of the other letters do not militate against this view. The cross-bar of *ka* is horizontal with ticks at either end. *Cha* has an ornate form with its beak drawn up to the line of the head-mark. *Ja* has three arms attached to the vertical. Angularity is marked even in the double curve of *Da*. *Dha* narrows its lower end, a characteristic of fifth-century writing. *Bha* is of the angular type. *Ya* has lost its third left arm but the loop is traceable in the thickening left at this point. This type of *ya* is seen in the Gadghwa inscription of Kumāra Gupta. In the conjuncts *ña* merges its upper arm with the head-mark. *Ña* has the cursive form, *sha* has its mid-line slanting downwards, *tha* is horizontal, and *ha* and *la* in combination have a common vertical. There is no doubt that the inscription was written in

¹ See below, pp. 162 and 164.

the early fifth century A.D. by a writer from the Middle Ganges Valley.

(c) Pl. XII. 5 is taken from the inscription from Shorkot in the Punjab, dated in the (Gupta) year 83. The place where it was found is identified with the city of Śibinagara. The inscription is engraved on a metal bowl. The writing shows an individualistic style in adding looped ends to the bottom of the long verticals, as in *ka*, *ra*, *śa* and medial *u*. Another special feature is seen in the head-mark, which is a hollow triangle. If these individualistic mannerisms are set aside, the forms of the letters fit the style of the early fifth century A.D. Here the medial *ā* is a horizontal line, but the medial *i* curls its upper end, as in the Mehrauli inscription, where the sign is modified to fit the angular style. The medial *o* follows the Kushāṇa style. The cross bar of *ka* is angular. In conjuncts such as *kla* and *kshu*, *ka* resembles an *x* with a top mark because of the combination of this angle and the head-mark. *Gha* has a slightly inclined but straight base. *Cha* is of the beaked type. The arms of *ta* meet in a curve. *Tha*, as seen in the conjunct *tthā*, is oval with the mid-line curved, a form also known from Central India. *Da* is of the double curved type. *Ḍha* is of the bulged form. The curved base of *na* is angular. The angularity is also marked in the form of *pa*, both of whose uprights have hollow triangular heads. The left side of *ba* is curved. *Bha* and *śa* have their right limbs longer than their left. *Ma* is of the open-mouthed type with a curve at the left angle, as is seen in the Kumāra Gupta inscriptions.¹ *Sa* is of the hooked type. The hollow triangular head-mark and the habit of giving curved tips suggest that the writer may have come from Central India. The form of *tha* lends support to this conclusion.

(d) Pl. XII. 7 is taken from the Tusam rock inscription. The letters are poorly engraved on the rock. No attempt is made to copy the ornamental forms. It illustrates a simplified style, but definitely shows the new tendency of the post-Gupta period. It may be dated in the first half of the sixth century A.D. The head-mark is generally a solid triangle. The only initial vowel found here is *a*, which is of the curved form. Another new form is seen in one variety of *ya*, in which the left vertical is merged with the loop, which is drawn along with the middle vertical—the form thus

¹ See above, p. 143.

produced approaching the bipartite type. *Ra* also shows a new tendency by having an upward slant at the foot. Other letters recall the Kushāṇa style. The most important are *kha* with its prominent triangular base and the curved base type of *na*. Influence from Kauśāmbī is seen only in the adoption of the open-mouthed *ṇa*. *Bha* keeps up the angular form. The open-mouthed *ma* has a curve at the left angle. *Sa* is of the hooked type. We also find here *la*, whose double curves are equalized. We do not find any cursive forms in the conjuncts. The medial vowels follow both the Kushāṇa and the eastern systems.

(e) *Kangra style*

Pl. XII. 8 is taken from the Nirmand inscription of Samudrasena. It shows the Kangra style of the early seventh century A.D. The inscription is dated in the year 6, but it need not be ascribed to the Harsha era. The writing is in the simplified style, but influence from the *kuṭila* forms is clearly seen in the shapes of some of the letters. On the other hand, there are several typical forms that indicate a regional version of the *kuṭila* writing in Kangra. Certain individualistic features may be noticed first: the feet of the left limbs of *bha* and *śa* and the hook of *sa* have curved strokes added to them. Of the initial vowels *ā* is of the curved type, *u* has a curved base, and *ai* has a flat top with an additional slant to the top left. But *i* preserves its three-dot form in one case and in the other example shows two dots above and a tailed one below. The medial vowels are simplified versions of those seen in the Middle Ganges Valley. Of the consonants *kha*, *ga*, *cha*, *ja*, *ṭa*, *ḍa*, *na* (optionally), *pa*, *pha*, *bha*, *ya* (optionally), *la*, *śa*, *sha*, *sa*, and *ha* preserve the older regional forms. The bent right verticals are observable in *ṇa*, *tha*, *dha*, *ma* and *ya*. The new influences can be seen in the use of the looped *ka*, the bulged form of *tha* and *dha*, the double curved *da* with a tail, the head-form of *na*, the acute angled *ma* and *ya*, *ra* with a triangular foot-mark, and the rounded *va*. In the conjuncts again no cursive forms are seen.

(f) *Chamba style*

Pl. XII. 9 is taken from five stone inscriptions from Chamba. The writing is in different hands. The Panali Nala inscriptions show a style with the head-mark which is usually a hollow triangle, but the Gum inscription has solid triangular heads. Again the

Panali Nala inscriptions are crudely engraved, but the Gum inscription is well executed. All of them clearly show the influence of *kuṭila* writing and forms identical with those seen in the Middle Ganges Valley at this time. Regional differences are no longer found. The inscriptions may be dated in the seventh century A.D. The only initial vowel found here is *a*, which is of the curved type with two arms of the curve projecting beyond the left vertical. The medial *i* and *ī* have their curves extended down to the bottom of the letters. *Ka* not only has the loop on the left, but also has an additional bent vertical on the right. *Ga* has the triangular foot-mark at the left limb. *Chha* is of the double-looped type. *Ṣa* merges its upper arm with the head-mark and bends the two lower ones downwards. *Na* is of the open-mouthed type with its base sloping to the right. *Ta* is of the *kuṭila* form. *Da* has an upward slant at the tip of the curve. *Dha* is of the bulged form, and *na* is of the head type, but also shows a regional variety of the looped *na*. Both *pa* and *ma* have acute angles on the right. *Ya* is of the bipartite type. *Ra* clearly shows the foot-mark. *La* slants its base upwards with its hook curled in. *Va* when triangular has its base slanting, and when rounded bends its right vertical. *Ṣa* shows an eastern form, with its top curled and joined by a bar to the right vertical. *Sa* is looped and has another variety with its mouth open.

(g) *The manuscript style of the Gupta period*

Pl. XII. 10 is taken from the palm-leaf manuscript *Kalpanāmaṇḍitikā*. The style shows some individualistic features which must be noted first. As is natural with the broad pen, the head-mark is throughout given in a thick line, and similarly the interplay of thick and thin strokes is clearly noticeable. At the lower ends of the verticals, as in *a*, *i*, *ka*, *ga*, *ra*, *śa* and the medial *u*, the writer leaves behind a flourish or slant that must be associated with his special manner of lifting the pen. If we ignore these peculiarities, the forms agree with the style current in the early fifth century A.D. in the Mathura region. The alphabets show a complete development of the Mathura Kushāṇa writing. The only influence from the Kauśāmbī style is seen in the form of the open-mouthed *ma*, but this also is of the Mathura type with a curve at the left angle, as is seen in the Kumāra Gupta inscriptions.¹ The striking difference from the Kushāṇa style is marked in the use of the

¹ See above, p. 143.

evolved angular *a* with a knot,¹ *kha* with its reduced triangular base and extended upper hook, the lengthening of the right limbs of *ga*, *ta*, *bha* and *śa*, the round-backed *ḍa* with a curved leg, the cursive form of the Kushāṇa *ṇa*, the oval *tha* with a mid-line, the angular *bha* with its middle bar broad and notched, the tripartite *ya* with its left arm merged in the loop, and *ra* with the foot-mark. The deciding factor in dating this manuscript is better illustrated by the medial *i* with its curve going to the left and the medial *ī* with its curve turned to the right—a practice not seen even in the Aliahabad pillar inscription of Samudra Gupta. It is only from the fifth century onwards that this style is known. The initial *i* preserves its three-dot form, as is also seen in the Indor and Nirmand plates. The initial *u* and *ū* lower the tips of their base lines. The initial *e* and *ai* have flat tops, and *o* has its central line inclined, as is seen in the Mathura inscription of Chandra Gupta II. The medial vowels follow the pattern of the fifth century, the only notable exception being the medial *u* and *ū*, which do not have the exaggerated curve. On the whole the forms are quite in keeping with those known from the inscriptions of the fifth century A.D.

(h) *The Bower MS.* (Pl. XII. 11)

The palaeography of this manuscript has been discussed in detail by Rudolf Hoernle in the pages of the *Indian Antiquary*² and later in his edition of the manuscript. His method of study is different from the system followed here. He singles out one letter, such as *ya*, and bases his conclusions about the dating of the manuscript on the forms of it appearing in the text. But I do not place much reliance on the evidence of single letters because forms were not uniformly adopted even in the same region. I believe first of all in assessing the general tenor of the writing, then in analysing the technical processes involved in the production of the letters, and finally in observing the different forms resulting from these sources. My dating depends on the evidence of all these three factors. Hoernle's date of the manuscript is not borne out by this test. Before a date is assigned, I shall describe the palaeography in our terminology. Hoernle divided the manuscript into seven parts and observed rightly: 'all the seven parts of the Bower Manuscript are written in an essentially identical script.' He also realized that different hands were used to write the different parts of the

¹ See above, p. 142.

² *Indian Antiquary*, xxi. 29-45.

manuscript, and these he divided into three groups: (i) parts I–III, (ii) part IV, and (iii) parts V–VII. Within this last group part VI shows a better hand than the rest. The writing material is birch-bark. A broad or edged pen was used, producing thick and thin strokes. No attempt was made to copy an ornamental style. Throughout the head-mark is distinctly given. It is a firm line, often with a notch in the middle. The foot-mark is also clearly visible at the base of the verticals. The marks in the letters *ka* and *ra* in part IV suggests that the writer lifted his pen with a back stroke and hence resulted in an upward slant at the foot. This tendency has been noticed in the manuscript described in (g) above. The letters *pa*, *pha*, *sha* and *ma* have acute angles on the right, and their right verticals are slightly bent. In some parts of the manuscript both *pa* and *ra* develop tails. This general similarity suggests that, though the hands are different, the date of the whole manuscript falls within one definite palaeographical period. From the point of view of palaeography it may be divided into two sections: (A) parts I–III, and (B) parts IV–VII. Of these part IV is in a very slovenly hand. Its letter forms show some cursive tendency but in general its essential features are the same as observable in other parts of (B). These two sections derive their letter forms from two different sources: (A) from what we have called the Rajasthani or Malwa style¹ and (B) from the Mathura style, but there are many borrowings from one to the other. Therefore it would be wrong to limit one section to only one source. Here an attempt will be made to trace the different traditions as they appear in the two forms.

The initial vowels of section (A) are exclusively derived from Rajasthan. The vowels of section (B) also appear to have come from the same source, but other traditions are also observable. The most important is the vowel *a* in this second section, which shows a development of the type which I have called the angular form with knot.² This knot assumes the form of a solid triangle, and in parts V and VI the triangle opens its mouth. In this section the initial *i* consists of three dots, two above and one below.³ This form is seen in the Mathura region as well as in Malwa in the Mandasor inscription of Yaśodharman.⁴ This was the standard

¹ See below, p. 154.

² See above, p. 142.

³ Hoernle's drawing of one dot above and two below in part IV, as given in his table 1, is a mistake.

⁴ See below, p. 159.

system of the three-dot *i*, probably evolved in Rajasthan. It is from this that the tailed *i* of the later times developed. The initial *e*, except in part IV which follows the other tradition, also differs from the form appearing in section (A). Here an upper stem projects from the triangular form and the left end of the triangle is slightly curved. In section (A) the upper stem disappears, but it leaves its trace by emphasizing the right arm of the triangle, which is generally bent. This *e* with a stem is again derived from Rajasthan. In section (A) the initial *a* is of the curved type with its two arms projecting beyond the left vertical, and the initial *i* has two dots above and a tailed one below. Both these forms first appeared in Rajasthan and Malwa, and later in the sixth century A.D. they were adopted elsewhere, probably with the migration of scribes after the Hūṇa invasion. No doubt the tail in the lower dot of *i* is the result of a general tendency in cursive writing. The initial *ī* maintains the Gupta form—a dot on either side of a vertical. The initial *u* curves its base downwards, and in part IV it is extended beyond the head-mark. The initial *ū* is formed by adding another curve going upwards in section (B) and downwards in section (A). The initial *ṛi* is a development from the cross form, as has been shown already.¹ *Ai* is formed by adding a horizontal stroke to the top left of *e*. *O* is a cursive form with its base curved down, and *au* has an additional upward curve attached to the form of *o*. In section (B) the Kushāṇa style of top strokes for the medials *e*, *ai*, *o*, and *au* is adopted, while the medial *i* has its curve extended downwards around the bottom of the letters. But in section (A) the eastern styles of the medial *e*, *ai*, *o*, and *au* are generally seen, while the medial *i* is not extended so far as to cover the bottom of the letters. But there is another type of the medial *i* used in section (B), the circle type which must have been derived from Rajasthan.² The consonants that show forms fundamentally different from the Gupta³ forms are *ka*, *bha*, *ya*, *śa*, and *sa*. In both the sections we have the looped type of *ka* used side by side with the cross-bar type, as is seen in inscriptions of the sixth century A.D. In both the sections the triangular foot-mark at the left limb of *bha* grows in prominence and the right limb curves downwards, and in

¹ See above, p. 121.

² See below, p. 157.

³ We restrict the term 'Gupta period' to only two centuries, the fourth and fifth, and hence do not include all the inscriptions given in Fleet's *Corpus*, as was done by Hoernle.

section (B) it appears to have an open mouth in some cases. *Ya* has three varieties—the tripartite form with a loop, which is preserved in Malwa till the sixth century A.D., the tripartite form with an outward curl at the left arm, which appears in the sixth century A.D. in Bengal, Nepal, Bihar, and Rajasthan, and the bipartite *ya*, which also appears in the sixth century A.D. Here the right limb of *ya* shows the *kuṭila* form. Two forms of *śa* are seen. One has a curl at the upper end of the vertical, joined by a slanting bar to the right vertical, a form which developed in the sixth century A.D. This is seen in section (A). In the other section we have a flat-topped variety with its left limb ending in an upward curl, again a late tendency. The dental *sa* either has a triangular loop or opens the mouth of its triangle, both features appearing in the post-Gupta period.

Kha does not have the foot-mark at the left limb, as is also the case in the inscriptions of Yaśodharman of Malwa.¹ *Gha* generally has its base divided into a straight right half and a curved left half. *Cha* is of the beaked type, and in section (B) the beak is exaggerated. *Ja* has its two lower limbs bent, and in parts III and IV the uppermost limb merges with the head-mark. *Jha* has an acute angle on the right. *Ṭa* has a flat top. *Na* is of the open-mouthed variety, but its corners tend to become small closed loops. *Tha* and *dha* are of the bulged form. In section (B) *tha* is horizontal. *Da* is of the double curved type. *Na* is still of the Mathura type with a curved base. The right verticals of *pa*, *pha*, and *ma* are bent. *Pha* generally has an outer curl in place of the inner loop. *Ba* has its left arm bent. *Ra* has an upward slant or a tail at the foot. Both *la* and *ha* have a firm base, two verticals, and a hook. *Va* is triangular but its base is slanting. *Sha* has the form of *pa*, with an added horizontal line in the middle.

These features point to a strong connexion with the writing style of the sixth century A.D. The manuscript may be dated in the first half of the sixth century A.D. Its script is related rather to the Rajasthani style than to that of Mathura.

(i) *Horiuzi Palm-leaf MS.* (Pl. XII. 12)

Max Müller notes the following tradition regarding the ownership of the manuscript: 'We have good evidence showing that these leaves were brought to Japan in A.D. 609, and that they came

¹ See below, p. 160.

from China. It is further probable that in China they belonged to the monk Yashi, who died in A.D. 577, and before him to Bodhidharma, who emigrated from India to China in A.D. 520'. Relying on this tradition, Bühler adds: 'Leaving all probabilities aside it is certain that this MS., which evidently has been written by an Indian scribe, cannot date later than the first half of the 6th century A.D.'¹ Later he² remarks: 'If we had no historical information regarding the age of the Horiuzi palm leaves, every palaeographer, I believe, would draw from the above facts the inference that they belonged to the beginning of the eighth century A.D.' Finally, he draws the conclusion: 'They clearly illustrate the truth of the maxim that the inscriptions are not safe guides for the investigation of the history of the Indian alphabet, but that in the development of the letters they lag behind the literary documents.'³ This maxim is probably true when two allied scripts are used—one for the inscriptions and the other for literary purposes or business documents. Examples can be cited of the simultaneous use of Hieratic and Demotic in ancient Egypt, or of Kūfic and Naskh in the Muslim world during the early centuries of the Hijra. Here the two scripts show development in their own ways. But when the same script is employed for inscriptions and literary documents, the difference will be merely stylistic unless a particular archaic form is deliberately preserved; e.g. in India and Pakistan even today only Naskh script is used for the letters of the Holy Qur'ān, though for other purposes Nasta'liq script is used. This same Nasta'liq turns into the Shikastā style in ordinary letter writing. But all three styles have been in use in the subcontinent at least from Mughal times. In the case of Indian inscriptions there is no reason to believe that the archaic form was deliberately preserved. On the other hand, the epigraphic writing shows changes that are traceable to the literary style because the new forms seen in the letters are the natural result of the technique of the pen rather than that of the engraver. In consequence of technical improvement new forms were being created, no doubt first in the literary style, but when these forms came into general use they were certainly adopted even in the inscriptions. An exceptional literary document may show one or two new forms, but in the general tenor of writing they must conform to the current system. It is on these grounds that the two manuscripts (*g*) and (*h*) pp. 147–51 have

¹ Max Müller, *op. cit.*, p. 64.

² *Ibid.*, p. 90.

³ *Ibid.*, p. 93.

been dated in the same manner as the inscriptions. If we rely on the historical tradition about the Horiuzi MS. and antedate it by two centuries, there is no reason why the above two manuscripts should not also be antedated by a similar period. This will lead us to accept a date for the complicated forms of the Bower MS. even before the appearance of the simple style in the Gupta inscriptions of the fourth century A.D. This is hardly possible. Hence I prefer to rely on the evidence of general palaeography for the date of the Horiuzi MS. In this choice support is derived from the fact that so much importance was attached not only to the text but also to the forms of the letters that as late as the seventeenth century A.D. Ziogon attempted to reproduce an identical copy. It may be that the original copy was made by an Indian scribe at the time referred to by Max Müller, but the present copy could not have been written earlier than about A.D. 700 at the earliest.

Bühler¹ speaks of five 'general principles visible in the formation of the letters'. The first refers to the Indian habit of writing each letter separately, the second to the triangular head-mark, and the third again to this head-mark, which at this time does not cover the entire breadth of the letter as it does in the later Nāgarī characters. These are the features shared by all the northern styles dealt with in this chapter. The fourth refers to the flattening of the tops of the letters *kha*, *ga*, and *śa*. This practice is known from the fifth century A.D. onwards. The last principle is described as 'the development of right hand verticals, projecting beyond the body of the letters'. In my terminology it can be described as the development of the tails—a feature which develops out of *kuṭila* writing and is seen nowhere in India before the close of the seventh century A.D. The best examples are the Nalanda stone inscription of Yaśovarman² and the proto-Nāgarī inscriptions of the Rāshtrakūṭas.³ That the Horiuzi MS. also falls in the same chronological sequence is borne out by a detailed analysis of the letters, which are seen not only in the text but also given separately as alphabets in the last line of the second leaf.

The initial *a* is of the curved type with the curve projecting its two arms beyond the left vertical, a feature of the later period. The long *ā* is formed optionally by adding a curve to the right vertical, as had been the practice since Gupta times, but a new form with

¹ Max Müller, *op. cit.*, p. 68.

² See above, p. 129.

³ See below, p. 164.

a vertical stroke on the right of short *a* is seen as in the Rāshṭrakūṭa inscriptions of the eighth century A.D. The initial *i* has two dots above and a tailed one below. The initial *ī* shows a new form, displacing the one which was in use since the Kushāṇa period. It shows four dots arranged in the form of a rhombus, the lowest one having a tail curved to the left. This form is also seen in Nepalese manuscripts from the tenth century A.D. onwards.¹ The other initial vowels are of the type seen in this period. The medial vowels have all become standardized, as is also seen in the Nalanda stone inscription of Yaśovarman. *Halanta* (a vowelless consonant) is marked by a short stroke attached to the bottom right of the letter. *Ka* is of the looped type. Flat tops are seen in *kha*, *ga*, *ṭa*, *dha*, and *śa*. The development of tails is observable in the right limbs of *ka*, *kha*, *gha*, *tha*, *da*, *dha*, *na*, *pa*, *ma*, *ya*, *la*, *va*, *sha* and *sa*. Remarkable late forms are *ṇa* with an angular right outer arm while the left still falls in a curve, *tha* with an outer loop at the top left, *pha* with an outer curl on the top right, the rounded form of *va* used both for *va* and *ba*, *bha* with a curved right limb and the left showing a notch; this last is an obvious simplification from the triangular foot-mark, though *sa* maintains the triangular loop at the bottom left with the only change that the loop is now filled up. Finally, *ma* has now merged its left tail in the twisted loop, as is also seen in the late inscriptions. On the whole the style is much simplified. The angularity is well marked and the bent verticals have mostly been straightened, leaving a trace in the tails—all these due to the hard pen that was used for writing, as has been rightly observed by Bühler.

B IV. *Rajasthan and Central India*

This section is not confined to one homogeneous region. It includes the different geographical zones that lie between North India and the Deccan. Quite naturally, the style of writing was not uniform throughout this area. But as a whole it had one common feature in that it received cultural influences both from the north and the south. Here the two cultural traits often came in conflict with each other, and this clash of the cultural ideals of north and south is mirrored in the styles of writing of this area. Out of this conflict the area produced a new style of its own, which spread to the Gangetic Valley and changed the characters of the Deccan.

¹ Bendall's *Catalogue*.

In this section we confine ourselves only to the influence of the northern and southern characters and finally see how they evolved into a new style. The local writing of the Deccan showing square-headed letters will be dealt with in a subsequent section.¹ The nuclear zone in this area is Malwa, the influence from which on the one hand reached the desert area of Rajasthan, and, on the other, penetrated into the Vindhyan forest belt. In the beginning of the fourth century Malwa was strongly under the influence of the Deccan, and, as we have seen in the last chapter, the southern style is clearly marked in the two Bijayagadh inscriptions.² But towards the close of the fourth century A.D., with the invading forces of Chandra Gupta II, the Kauśāmbī style of writing was introduced here, as is attested by the Udayagiri cave inscription of Śāba Virasena. This style left its influence in the subsequent records. But the Deccani character was not ousted suddenly. In the inscriptions of the local rulers it survives right up to the end of the fifth century A.D. The next change is noticeable in the time of Budha Gupta and the Hūṇa ruler Toramāṇa. As the features associated with this change are first seen in this area, I have termed this style of writing Malwa or Rajasthani. These features are not seen in the inscriptions of Budha Gupta found in the Middle Ganges Valley and Bengal. Subsequently the inscriptions of Yaśodharman show a development of this same style. Further confirmation of this assumption comes from the Vindhyan belt, where the series of Khoh copper plates reveal a very similar style of writing. In the seventh century A.D. again influence from the Middle Ganges Valley reaches this region and ornamental characters or *kuṭīla* forms begin to appear, as is attested by the Vasantagadh inscription. But the Rajasthani style continued to develop on its own lines and towards the close of the seventh century we meet with the evolution of proto-Nāgarī in the inscriptions of this period.

This material is treated in three different groups:

- (a) The inscriptions of Malwa and Rajasthan.
- (b) The inscriptions of the Parivrājakas and the Uchchhakalpas.
- (c) The inscriptions of the Rāshtrakūṭas.

¹ See below, p. 171.

² See above, p. 93.

(a) *The inscriptions of Malwa and Rajasthan*

(i) Pl. XIII. 1 is taken from the Udayagiri cave inscription, dated in the (Gupta) year 106 (A.D. 425). It is a private record. The letters, which show a distinctly triangular head-mark, are boldly engraved, and some of the medial vowels, such as *ā*, *e*, and *o*, show flourishes and produce an effect not dissimilar to the Mehrauli pillar inscription and the Bilsad inscription of Kumāra Gupta I. But the medial vowels are derived both from the north and the south. The northern features are marked in the top slants for *ā*, *e*, *o*, and *ai*, in the curved hooks for the medials *u* and *ū*, and in the medial *ī* which is turned to the right with an initial prominence. But we also find the horizontal *ā*, and the medial *ī* has the circle of the south as well as the left curve of the north. Southern influence can also be seen in the medial *ṛi*, as applied to *nṛi* and *kṛi*, in the form of a round curve to the left ending in a curl. The initial *ā* introduces the new type, the earliest of its kind. It is from this that the later forms of the sixth century A.D. are derived. It consists of two vertical limbs joined by a slanting bar, the right limb having a curved tip, a southern characteristic, and the left limb having a crooked appendage open to the left. This is the beginning of the curved *a*. To this form of *a* a slanting stroke on the right is added in the southern fashion to make a long *ā*. The only other initial vowel used is *u*, the base of which is gently curved upwards in the southern fashion. But the consonants all show northern features. The verticals in *ka* and *ra*, the upper limb of *la*, and the vertical stroke for the medial *u* in *mu* and *yu* do not show any tendency to curvature. The flat tops of *kha*, *ga*, *ṭa*, *dha*, and *śa* again relate them to the north. In the same northern fashion *kha* has its triangular appendage on the inner side of the right limb, the right verticals of *ga*, *ta*, *bha*, and *śa* are longer than the left, and the left verticals of *kha*, *ga*, and *śa* show foot-marks; *cha* is of the beaked type; *ṇa* is of the open-mouthed type; the two limbs of *ta* meet above either at an angle or in a curve; *tha* has a dot within a circle; *da* is round-backed; *dha* has its lower end narrowed; *na* has two varieties—one with a curved base and the other with a looped one but with the loop filled up; *pa* shows slight curvature; *ba* is rectangular; *bha* is of the angular type; *ma* is of the tailed variety; *ya* is of the tripartite form but the left arm

is changed into a loop; *ra* has a trace of the foot-mark; both *la* and *ha* have a firm base with two uprights and a hook; *va* is triangular; *śa* and *sha* have a mid-line; and *sa* has a hook attached to the left limb. In the conjuncts we should note the forms of *ñghi* and *sthi*. In *ghna* and *stu* the second consonants *na* and *tu* have been constricted, and not the first, as is required by the rules of grammar.

(ii) Pl. XIII. 2 is taken from the Bihar Kotra inscription of Naravarman, dated in the (Vikrama) year 474, and from the Gangadhar inscription of Viśvavarman, dated in the (Vikrama) year 480. Pl. XIII. 3 is derived from the Sanchi inscription, dated in the (Gupta) year 131, the Mandasor inscription of Govinda Gupta, dated in the (Vikrama) year 524, and the Mandasor inscription of Kumāra Gupta and Bandhuvarman, dated in the (Vikrama) years 493 and 529. These two groups show the last survivals of the southern characteristics in this region. However, they have the head-marks in the north Indian fashion. The medial vowels are given in the southern style; the only northern influence that can be traced is in the top curved slants for *ai* and *au*. The distinguishing southern medial vowels are the circle-stroke for *i* and *ī*, the left rounded stroke for *ṛi*, a cursive form of the medial *o* in *lo*, and a curved tip in the vertical stroke of the medial *u*. The initial *a* maintains the curved form of (i) above only in no. 2, but no. 3 shows the older form with a hook attached to the left limb. The other initial vowels are all in the southern style. *I* has a curved roof above two dots, but in no. 2 the roof is doubled. The term roof-type of *i* will be used henceforward. *U* is of the same form as in (i) above. *E* has an upper stem with the corners of the triangle rounded. In no. 2 the stem is very faintly visible. *Au* maintains the 'z'-form but with the angles rounded and an additional slant going upwards. Of the consonants no. 2 has some forms borrowed from the north, while no. 3 exhibits exclusively southern forms. No foot-mark is seen at the left limbs of *kha*, *ga*, or *śa*. In fact both the limbs of *ga*, *ta* and *śa* are equal, except in no. 2, where *ga* has a longer right limb. *Gha* is of the southern type with its left vertical bent. *Na*, as seen in the conjunct *ngo*, has two arms with a straight vertical. *Cha* is of the beaked type as in the north. *Ja* has three straight arms attached to a vertical, but in no. 3 the vertical is bent in the southern fashion. *Ña*, as seen in the conjuncts *ñcha* and *jña*, is of two types—in the latter example it is of the

looped variety, and in the former the usual type. *Ṭa* is almost a half-square. *Ḍa* in no. 2 has a bent leg, but in no. 3 has a squarish back. Both *na* and *ṇa* are of the looped type. *Ta* in no. 2 has an angle at the meeting-point of the lower limbs, but in no. 3 a curve. *Tha* is oval with a curved line within. *Da* is rounded in no. 2 but squarish in no. 3. *Dha* narrows the lower end in no. 2, but in no. 3 the old Deccani form is seen, with an arc on the left attached to the two arms of a triangle. *Pa*, *pha*, *ba*, *sha*, and *ha* have notches at the left arms. *Bha* is of the broad type. *Ma* is also of the southern type with a loop at the bottom and two strokes above. *Ya* is of the tripartite form but has no loop at the left arm. *Ra* has a curved tip, and *la*, when used singly, curves the upper end of the vertical to the left. *Va* is of the triangular type. *Sa* has a hook at the left and *ha* has a firm base. The *jihvāmūliya* does not have the dumb-bell form of the north, but resembles the form of the southern *ma*, while the *upadhmāniya* has a cross within an oblong form. Thus southern influence persists throughout these inscriptions. It must, however, be remembered that this southern influence is all traceable from Gujarat and Kathiawad. These inscriptions show no trace of the new tendencies that were appearing in the extreme south. Probably it will be better to call these features Central Indian, as their source lay in the inscriptions of the Śātavāhanas and the Western Kshatrapas.

(iii) Pl. XIII. 4 is taken from the Eran pillar inscription of Budha Gupta, dated in the (Gupta) year 165, Pl. XIII. 5 is derived from the Eran inscription of Toramāṇa, and Pl. XIII. 6 from the Gwalior inscription of Mihirakula. These inscriptions did away with the southern features from this region for good, and initiated new styles allied to the northern characters. All the medial vowels now follow the northern system. Remarkable is the change in the medial *ṛi*, which now curves to the right, as in the north. The medial *i* optionally extends its curve to the bottom of the letters, and the medial *ī* curves to the right. The initial *a* preserves the local curved type as well as the Gupta form, with its left hook having a graceful bend. The long *ā* is now made by adding a curve to the foot of the right limb. The initial *i* is also of the northern type with two dots above and a tailed one below. The initial *u* also has the northern form with its base curved downwards to the left. The initial *e* has a flat top and a narrow lower end. The right limbs of *ga*, *ta*, *bha* and *śa* are longer than the left, while the left limbs

of *kha*, *ga* and *śa* have foot-marks. *Gha* has a variation at its base. *Cha* is of the beaked type. *ṣa* has its three arms straight. The tops of *ga*, *ṭa* and *śa* are now flat. *Ḍa* has a long leg as in the north, while *ḍha* is round-backed. *Ṇa* is of the open-mouthed type. In the Gwalior inscription the inner arms of *ṇa* optionally almost coalesce. In Budha Gupta's inscription *tha* maintains the southern form, but in the Toramāṇa inscription it has the oval with the mid-line, and in the Gwalior inscription it is of the bulged form. *Da* is of the double-curved type, *dha* of the bulged form, and *na* of the looped variety. The curve at the left sides of *pa*, *pha*, *ba*, *sha* and *ha* is no longer seen. *Bha* is of the angular type, *ma* is of the tailed variety, and *ya* has a left loop in the tripartite form. *Ra* has a foot-mark, and *la* curls its left hook downwards, while *ha* has a gradual curve in its base line. On the whole these inscriptions preserve their distinction from those of the Middle Ganges Valley.

(iv) Pl. XIII. 7 is taken from the Mandasor inscriptions of Yaśodharman, one of them being dated in the Mālava (Vikrama) year 589 (A.D. 532). Further influences from the Middle Ganges Valley are noticeable in these inscriptions. These give an ornamental character to the medial vowels. But the forms of the letters still maintain the individuality of this region. These forms show a development of the style seen in (iii) above. The head-marks are solid triangles, while foot-marks are present at the lower ends of most of the verticals. The new taste in the formation of the medial vowels is very clear. We find in them the effect of the broad pen showing an interplay of thick and thin strokes. The top slants in the medials *e*, *o*, *ai* and *au* prolong the strokes with twists and bends. The top slant of the medial *ā* curves on the right. Side by side with the usual left curve of the medial *i* we have also a new variety, which has a long loop inclined to the left. The medial *ī* is curved to the right. The medial *u* is a downward curve or a vertical extended downwards. For the medial *ū* an additional curve is given either on the right or on the left of the vertical. The initial vowels preserve the local types. The initial *a* is of the curved type with the two arms of the curve projecting beyond the left vertical. The initial *i* maintains the three-dot form, with two dots above and one below. *U* curves its base downward to the left. *E* is triangular with a flat top. *Au* is also in the northern fashion with its base curved as in *u* and another curled stroke going up

from the mid-angle to the right. Of the consonants the upper curve of *kha* is still short, but a very faint foot-mark is seen at the left limb; *gha* divides its base into a sloping right half and a curving left half. *ṣa* maintains its three arms on the right but slightly curves the tip of the lowest arm. *ṭa* has a broad dot at the head and *ḍa* has a long leg. *ṇa* is of the open-mouthed type, and *tha* and *dha* show slight bulges. *Da* is of the double-curved variety, and *na* has its head on the left. *Pa*, *pha* and *bha* are still angular. *Ma* loses its tail but bends its left vertical. *Ya* is also of the tripartite form with a loop at the left arm. *Ra* has a triangular foot-mark. Both *la* and *ha* have firm bases with their hooks beautifully curled. *Va* is triangular, and *sa* preserves the local variety with the left hook. *Ṇa* is frequently employed in conjuncts in place of *anusvāra*, e.g. *ṇisu* in place of *ṇṣu*. *Ṇa* in *jṇa* is of the cursive form. *Tha* in *sthi* is horizontal, and *ṭa* in the conjunct *shṭa* has its mouth turned downwards. On the whole the inscriptions of Yaśodharman keep up the regional variety.

(v) Pl. XIII. 8 is taken from the Vasantagadh inscription of Varmalāta, dated in the (Vikrama) year 682, and Pl. XIII. 9 from the Nagda inscription of Aparājita, dated in the (Vikrama) year 718. These inscriptions show some further influences from the Middle Ganges Valley. These influences may have come even earlier, but no better inscriptions are available to illustrate them. Here we find fully developed ornamental medial vowels and *kuṭila* forms of the letters. The head-mark is a solid triangle. The local forms, at least in two letters, *a* and *sa*, are still seen. The medial vowels need not be described as they are of the same type as those of the Middle Ganges Valley at this time. Among the consonants we find the looped *ka*, the curved *ja* with its upper arm merged in the head-mark, the flat-topped *ṭa*, the bulged forms of *tha* and *dha*, the head-form of *na*, and *pa* and *pha* with their left corners rounded. Notable eastern influence can be marked in the form of *bha*, which has a triangular foot-mark at the left limb; *ma* which has a closed loop at the left; *ya* which is of the bipartite as well as of the tripartite form with the outward curl at the left vertical; *ra* with the triangular foot-mark; *la* with its left hook turning in a beautiful curl; the rounded type of *va*; *śa* with a rounded top, which in no. 8 has its mid-line aslant; and *ha* with its base double-curved and the hook extended downwards.

Ba maintains its usual form here, but in the East only the form of *va* is used at this time.

(vi) Pl. XIII. 10 is taken from the Kanaswa inscription of Śivagaṇa, dated in the (Vikrama) year 795, Pl. XIII. 11 from the Buchkala inscription of Nāgabhaṭa, dated in the (Vikrama) year 872, and Pl. XIII. 12 from the Barah plate of Bhojadeva, dated in the (Vikrama) year 893. These inscriptions show a development away from the ornamental tendencies seen in (v) above, towards simplification. Nos. 10 and 11, which are engraved on stone, still have a touch of flourish, but no. 12, which is a copper plate, shows only simplified forms. This simplification is noticed to a greater extent in the copper plates of the Rāshtrakūṭas of still earlier date, as we shall see below. This fact may suggest that the copper-plate engravers of this region favoured a simplified style. The truth of this is borne out by the copper plates of the Maitrakas of Valabhi and the Chālukyas. The letters have a triangular head-mark in the stone inscriptions, but only a line mark in the copper plate. The *kuṭila* forms are preferred in the stone inscriptions but the copper plate has straight verticals and flat tops. The development of tails in letters such as *ka, ja, da, pa, ma, ya, ra, la, va, sha, sa* and *ha* is seen in both the styles. The forms in the stone inscriptions generally agree with those seen in the Middle Ganges Valley, and these need not be described again. But the copper plates show some new features. The medial *ā* has a long vertical on the right. The medial *i* and *ī* extend their curves downwards. The medial *u* has only a curved stroke, and the vertical form seen earlier in some cases is no longer used here. The medial *ū* also is a slanting stroke with a head to the left. But in the case of the medial *e, ai, o* and *au* the older style of the left horizontal stroke still continues optionally. In the initial *a* the two strokes attached to the left end are clearly seen and its right limb slants downwards to the left. The initial *i* has its tail curved to the left, while *u* does not have the head-mark. Remarkable developments in the consonants can be seen in the following: the top arm of *ja* is totally lost, and its second arm falls down from the head-mark while the third extends its curve to the left; *ṭa* has the head-mark; *ta* has an angular hook attached to the right limb; the bulged form of *tha* has an outer loop; *bha* and *sa* are of the open-mouthed forms. In the conjuncts the cursive form of *ṇa* and the constricted forms of other letters are notable.

(b) *The inscriptions of the Parivrājakas and the Uchchhakalpas*

Only copper-plate inscriptions of these rulers have been illustrated here, and these show only the simplified styles. On the basis of the head-marks they fall into two groups: (i) those having hollow triangles, and (ii) those showing notches or simple lines. In their forms influences from the Middle Ganges Valley are easily traceable. Similarly, the medial vowels adopt the northern fashion.

(i) Pl. XIV. 6 is taken from the Poona copper plate of Prabhāvatī Guptā, which actually belongs to the Vākāṭaka dynasty, but is included here as it is the only inscription of the Vākāṭakas showing triangular head-marks. Pl. XIV. 7 is derived from the Majhgawan plates of Mahārāja Hastin, dated in the (Gupta) year 191. Similar triangular head-marks are also seen in the Sunakala (Broach district) plates of the Gurjara king Saṅgaṇasimha, dated in the (Kalachuri) year 292 (A.D. 540).¹ The Poona plate shows a rather mixed style containing features both of the north and of the south. The influence of Kauśāmbī is seen in the longer right arms of *ga*, *ta*, *bha* and *śa*, the triangular foot-marks at the left limbs of *ga* and *śa*, the use of the open-mouthed *ṇa*, the oval *tha* with a mid-line, the looped *na*, the angular *bha*, the open-mouthed *ma*, the hooked *la* and *ha*, and the looped *sa*. The northern tendency is again seen in the curved types of the medial *i* and *ī* and the top slants for *e* and *o*. Southern influence is traceable in the curved tips of *a*, *ka*, *bha* and the vertical type of the medial *u*. The southern forms are observable in the initial *u* with its base turned upwards, *kha* with its short upper hook, *cha* with its broad body, *da* with angular back, the broad *dha*, *pa* and *ba* with their left sides curved, the tripartite form of *ya* without the loop at the left, *va* with a broad body attached to the right vertical, and *ma* in the conjunct *mrā*, obviously derived from the form with a base loop as seen in the Vākāṭaka records. On the whole the inscription clearly shows how with the political influence of the Guptas their writing style also influenced this distant region.

The Majhgawan inscription does not show southern influence at all. Apart from the triangular head, the letter-forms are mainly traceable to the Middle Ganges Valley, but a few letters maintain their regional characteristics. Of these *la*, *sa* and *ha* are notable.

¹ *Epigraphia Indica*, x. 74-76.

Both *la* and *ha* have firm bases with two uprights and a hook. *Sa* has a hook on the left. The medial vowels are all of the same type as is seen in the Gupta inscriptions of the fifth century A.D. Other Gupta forms can be seen in *a* with a hook at the left limb below, the open-mouthed *ṇa*, the looped *na*, the angular *bha*, and the tailed *ma*. *Ya* has two forms, the tripartite with a loop at the left vertical, and the bipartite. The initial *e* has a flat top, but *ga* and *śa* have rounded tops. The initial *au* is unique, having a very simplified form of *a* with two additional curved strokes as in the medial *ū*. *Kha* has its upper hook short, and the base of *gha* is straight, while *cha* is of the beaked type. *Chha* is of the double-looped form. *ṣa* has three straight arms attached to the left vertical. Both *ṭa* and *ḍa* are angular but the two verticals of *ta* meet in an upper curve. *Tha* is oval with a mid-line. *Dha* is oblong. *Pa* optionally has its right arm bent, while the left side of *ba* is curved. In the conjuncts the notable forms are *ṇho* and *shṭhi*.

(ii) Pl. XIV. 8 is taken from the copper plates of Hastin and Jayanātha, dated between the (Gupta) years 163 and 177, Pl. XIV. 9 is derived from the copper plates of Sarvanātha and Saṅkshobha, dated between the (Gupta) years 193 and 214, and Pl. XIV. 10 from the Arang plates of Bhīmasena II, dated in the (Gupta) year 282. These plates illustrate the change from the Gupta to the Malwa or Rajasthani style of writing. These inscriptions preserve the simplified style of the medial vowels and do not show the forms associated with the *kuṭila* writing, though the Middle Ganges Valley forms survive in the open-mouthed *ṇa*, the looped *na*, and the tailed *ma*, and bent right verticals are occasionally seen in *e*, *ga*, *pa* and *ma*. The acute-angled forms are not known here at all. The initial *a* develops the curved type but also optionally preserves the Gupta form in nos. 8 and 9. The initial *i* exists in the three-dot variety as well as the roof type in no. 8. The long *i* is of the Gupta type with a dot on either side of a vertical. *U* curves its base downwards to the left, and *e* sometimes has a flat top or bottom. *O* is of the northern type with its base curved downwards. The left limbs of *kha*, *ga* and *śa* show the line foot-mark. *Gha* has a straight base in no. 8, but divides it in no. 9. *Cha* has the pointed beak as well as the broad type. The lowest arm of *ja* is slightly bent. *ṣha* keeps up the angular form. *Ṇa* in the conjunct *jṇa* optionally is of the cursive form. *ṭa* has a flat top, and *ḍa*, *dha*, and *da* have rounded backs. *Ta* is angular in some cases, and in others preserves

the Deccani type¹ with a curved hook attached to the right of a sloping vertical. *Tha* is oval with a mid-line, but *dha* in no. 10 is of the bulged form. *Pa* rounds its left angle in nos. 8 and 9, but in no. 10 has a slight notch on the base line. *Ba* has a square form, and *ya* is tripartite with a loop added optionally at the left vertical. Both *la* and *ha* have firm bases with two uprights and a hook, but optionally their bases are rounded. *Va* is triangular with the base sloping. *Sa* has a hook attached to the left. The conjunct *lpa* has a common vertical for *la* and *pa*, and *ṭa* in *ṣṭa* has its mouth turned downwards.

(c) *Inscriptions of the Rāshtrakūṭas*

Pl. XIV. 11 is taken from the Tiwarkheda plates of Nannarāja, dated in the Śaka year 553 (A.D. 631), and Pl. XIV. 12 is derived from the Samangada plates of Dantidurga, dated in the Śaka year 675 (A.D. 753), and the Paithan plates of Govinda III, dated in the Śaka year 716 (A.D. 794). As has been remarked earlier, these copper plates show only the simplified style, but there is a marked difference between no. 11 and no. 12. The first shows the influence of the *kuṭila* writing of the north and has short line head-marks, while the second illustrates the simplified copper plate style of Rajasthan, and here the head-marks cover the entire breadth of the letters. In no. 11 tails are not so well marked, except in *da*, but no. 12 has long tails in *ka*, *kha*, *gha*, *cha*, *ja*, *da*, *na*, *pa*, *ya*, *ra*, *la*, *va*, *sha*, *sa* and *ha*. The medial vowels are of the same type as those of the Barah copper plate analysed earlier, with only this difference, that the long *ā* is sometimes given in no. 11 only by a short vertical stroke on the right of the letters. The initial *a*, *ā* and *i* in no. 11 follow the forms of the Middle Ganges Valley, but in no. 12 are of the same type as in the Barah copper plate. The simple triangle of *e* in no. 12 has a flat top. *Kha* in no. 11 has its triangle outside the right limb and slightly opens its mouth, as is seen in the late forms of the eastern region.² *Ṇa* has the well-developed cursive form in no. 12, but *na* maintains the looped variety. Both *tha* and *dha* are of the bulged form, with *tha* having a loop on the outer side. Both *bha* and *sa* open their triangular mouths. These forms were obviously brought in from the north, as we saw in the Barah copper plate. The rounded form of *va* is used for both *ba* and *va*. *Ma* has a loop at the left angle and *ya* is of the bipartite

¹ See above, p. 67.

² See above, p. 135.

type. *La* gracefully curls its left hook, and *śa* has a rounded top. *Ha* has a rounded base as well as a wavy curve with a tail. The cursive forms are very prominent in the conjuncts. The lower *ṭa* in the conjunct *ṭṭa* has its mouth turned downwards, as in the eastern region. On the whole these forms show a great advance in the direction of the development of proto-Nāgarī. It is quite obvious that the Rāshtrakūṭas were responsible for introducing proto-Nāgarī character in this part of the Deccan.

B V. Gujarat and Kathiawad

This is the region where the Western Kshatrapas formerly held sway. Often they were at war with the Śātavāhanas. The style of writing which developed in this region was the result of the mutual influence exerted by both of them—the Śātavāhanas introducing southern influences and the Western Kshatrapas trying to maintain their northern tradition. The legacy left behind by them is seen in the inscriptions of the Traikūṭakas, the Gurjaras and the Maitrakas. The tendency revealed here is gradually to abandon the southern features and to evolve a simplified style of their own and thus pave the way for Gujarātī. The simplified nature of the style may be due to the copper plates from which the writing is known to us today. But one important fact is remarkable, that no influence of ornamental writing either from the north or from the south is traceable in the style as developed here. The inscriptions are studied in the following groups:

(a) Pl. XIV. 1 is taken from the Junagadh rock inscription of Skanda Gupta, dated in the (Gupta) years 136, 137 and 138. This inscription does not copy the Gupta forms of other regions, but is completely in the local style. It establishes a link between the writing of the Western Kshatrapas and that which later developed in this region and further provides a source from which the Malwa style of the fifth century was derived. In this as well as all the subsequent inscriptions of this region the head-mark is a simple line. No foot-mark is traceable in any of these inscriptions. In the Junagadh inscription new developments in the medial vowels are seen. These are entirely different from those used in the north. The medial *i* has a circle-stroke, and an additional tick within it makes it a sign for the medial *ī*. The medial *o* in *lo* is cursively drawn by turning the top of the right arm into a tailed loop.

Henceforward I shall call it the curve *o* in *lo*. The medial *ri* is a curved stroke turned upwards on the left. The medial *ū* has an additional horizontal stroke given to the vertical of *u*. The southern tendency is traceable in the curved tips of *a*, *ka* and *ra* as well as in the vertical type of the medial *u* and the right arm of *la*. The local types are seen in the initial vowels and also in the consonants. The initial *a* has a hook at the bottom of the left limb, and for the long *ā* a slanting curve is added to its right vertical. *I* is of the three-dot form, with two dots on the left and one on the right. *Ū* has its base turned upwards with an additional horizontal stroke within. *E* is triangular with a stem projecting upwards from the right arm. *Ga*, *ta* and *śa* have equal arms meeting upwards in a rounded curve. *Kha* has a short upper hook and a quadrangular loop below. The body of *cha* is almost quadrangular, having a stem on the right. It resembles a foot, and henceforward I will call it the foot type of *cha*. *Ja* retains the form of two curves one above the other. *Ōa* as seen in the conjunct *jña* has its full form. *Da* and *da* are round backed. Both *na* and *ṇa* are of the looped type. *Tha* is either oval or quadrangular with a short line within. *Dha* has a broad arc added to the vertical on the right. *Pa*, *pha*, *ba*, *sha* and *ha* have their left arms bent. *Bha* is of the broad type with a notch in the middle. *Ma* has a loop below and two prongs above. *Ya* is of the tripartite form but has no loop at the left arm. *La* has a firm base with its arm curling up towards the left. This type will be henceforward called the curved *la*. *Va* is triangular. *Śa* has its mid-line optionally short. *Sa* has the hook on the left. *Ya* in the conjunct *bhyaṃ* still maintains the tripartite form.

(b) *Inscriptions of the Traikūṭakas*

Pl. XVI. 8 is taken from the Pardi plates of Dahrasena, dated in the (Kalachuri) year 207 (A.D. 457), and the Surat plates of Vyāghrasena, dated in the (Kalachuri) year 241 (A.D. 490). These inscriptions not only preserve the southern characteristics, as seen in (a) above, but they also show some further southern features. The most remarkable of these is the adoption of the southern type of the initial *i*, which here has a double roof. A new type of the medial *au* appears in *pau*, in which the two top strokes join together in a curve on the right. This will be henceforward called the curved type of the medial *au*. Other medial vowels are of the same type as in (a) above. But the medial *ā* as in *lā* and the medial *e* as in *ne* are some-

times applied to the middle of the letters. This tendency is certainly derived from the practice in the Girnar version of the Aśokan edicts, where in *mā* and *me* the medial vowels are given in the middle. The medial *u* in *gu*, *nu*, *bhu* and *śu* curves upwards—a tendency common in the southern inscriptions. The initial vowels other than *i* are of the same type as in (a) above. Of the consonants the looped base of *kha* is almost triangular; both *ḍa* and *da* show the angular back of the south; *ta* has an angular hook attached to the right vertical as in the proto-Nāgarī *ta*; *tha* is a rough oval with a small circle within; *dha* is of the broad type; the left arms of *pa* and *sha* are bent; *ba* is rectangular; *bha* is of the broad type; *ma* has the loop with two top prongs; the right vertical of *la* curves at the top; and *ya* is of the tripartite form with its left vertical dropped, but sometimes we find a loop in place of the latter. In the conjunct *yya* the first letter is tripartite and the second is hooked.

(c) *Inscriptions of the Gurjaras*

Pl. XVI. 9 is taken from the Sankheda plates of Dadda, dated in the (Kalachuri) year 346 (A.D. 595) and the Abhona plates of Śāṅkaragaṇa, dated in the (Kalachuri) year 347 (A.D. 596). Pl. XVI. 10 is derived from the Vadner and Sarsani plates of Buddharāja, dated respectively in (Kalachuri) years 360 and 361, and from another set of Sankheda plates of Dadda, dated in the (Kalachuri) year 391 (A.D. 640). There are other inscriptions of the Gurjaras which have square head-marks. These will be discussed in the next section. The two groups given here illustrate how far the southern influence was affecting this region. In the medial vowels the only noticeable change is in the medial *i*, in which the circle type has a small circle within it, as in *nī*. But side by side we also find the northern form with its curve turned to the right, as in *vī*. Another northern form is seen in the medial *au* as applied to *pau*. The medial *ā* in *nā* is turned upwards as in the north. But in no. 10 the medial *ā* is generally a long vertical on the right of the letter—a feature probably derived from the south and passed on to the north. Among the consonants we find at least one northern type—the open-mouthed *ṇa* of the Kauśāmbī style is used here optionally. We can also note the optional use of the angular *bha* of the north. The southern types are observable in the following—one of the initial *ās* in no. 9 extends the lower curve of the right vertical

upwards as in the Chālukyan writing;¹ the initial *e* has a stem and optionally opens its mouth; the looped base of *kha* opens its mouth in no. 10; *cha* in no. 10 is a further development of the foot type; *ba* in no. 10 has its left arm deeply curved inwards; in no. 9 *la* optionally extends its curve downwards. But against these outside influences we notice in these letters a tendency to reduce the curves at the tips of the verticals. The initial *u* maintains the local form as in (a) above, and the initial *o* has the 'z'-form. No change is seen in the forms of *ga*, *ja*, *ṭa*, *ḍa*, *ta*, *da*, *dha*, *pa*, *pha*, *ma*, *ya*, *va*, *śa*, *sha* and *ha*. All these letters maintain the local forms. Similarly looped *ṇa* and *na* are also seen here. In *tha* the inner circle is sometimes replaced by a tick. The distinction between nos. 9 and 10 is well-marked by the development in the medial vowels and the adoption of new forms.

(d) *Inscriptions of the Maitrakas of Valabhi*

The inscriptions of the Maitrakas represent what may truly be called the Kathiawadi style of writing. They illustrate the development of writing from the Junagadh inscription of Skanda Gupta. Though extraneous influences are noticeable in some of the letters, we can trace through them a gradual evolution of a simplified local style. The old feature of curved tips seen at the verticals of the letters is retained till the last, though the curvature is gradually reduced in all but *la*. This letter gives importance to its upper curl as is also seen in the later Chālukya and Rāshtrakūṭa inscriptions. Technically the evolution here takes place by a process of simplification. This process will be studied in two stages: (i) the inscriptions of the sixth century A.D. which show a change from the Junagadh writing to the Maitraka style, and (ii) the final development of this style in the seventh century A.D.

(i) Pl. XIV. 2 is compiled from the Maitraka inscriptions, dated between (Gupta) years 183 and 210 (A.D. 502 and 529), and Pl. XIV. 3 is derived from their inscriptions dated between (Gupta) years 246 and 286 (A.D. 565 and 605). The medial vowels used in the Junagadh inscription continue in no. 2, but changes are also seen. The medial *i* optionally uses the northern type of the right curve, and this type ultimately displaces the circle type in no. 3. The curved type of the southern medial *au* is seen here in *mau*, but with the verticals extended downwards. The medial *u* in *ku*, *chu*, *tu*,

¹ See below, p. 184.

bhu, and *su* is curved downwards, and the medial *ū* in *dhū* shows an additional curved stroke to the left of the curved *u*—a type which is also seen in the southern inscriptions. In the initial vowels the change is seen in *i*, which is now of the roof type, with a notch in the middle of the roof. This roof in no. 3 has a double curve. The initial *ī* is of the common type with a dot on either side of a vertical. The base of *u* curves upwards, and *e* has a stem in no. 2, but in no. 3 it is of the foot type with its mouth optionally open. The curves at the vertical tips of *a*, *ka*, *ra* and *ñā* (in the conjunct *jñā*) are seen in both inscriptions. *Kha* in no. 2 has an optional form with its triangle at the outer side of the vertical. Both *ga* and *śa* have equal arms meeting in a rounded top, but in no. 3 a head-mark is seen over *ga*. The left arms of *gha*, *pā*, *pha*, *sha* and *ha* have bends, but these are less prominent in no. 3. *Cha* is of the broad type, but the pointed beak is seen optionally used in no. 2. *Chha* is of the double-looped type with its right loop smaller than the left. The two curves of *ja* are now quite distinct, the upper being smaller than the lower. *ṣha* has the angular hook but no curved tip. The head-mark is given over *ṭa* and *ṭha*. *Ḍa* is round-backed, with an additional curve attached to its end. The forms of *pha* and *ḍha* are almost identical. Besides the looped types of *ṇa* and *na* we have also the open-mouthed type of *ṇa*. *Ta* shows a definite change in having an angular hook attached to the right vertical, as is later seen in proto-Nāgarī. *Tha* has either a spiral form with the mouth open or a rough oval with a tick within. *Ḍa* is of the round-backed type, while *dha* is broad, with an optional head-mark. *Ba* in no. 3 has a deeply bent left arm. *Bha* is of the broad type, but its middle bar is either straight or slanted upwards with a notch in the middle, the whole approaching the shape of the angular *bha*. *Ma* has the bottom loop, but in no. 2 the loop is almost quadrangular and tilted to the left. *Ya* is of the tripartite form and occasionally has the inner loop or curl at the left arm. The hook and the left vertical of *la* are drawn together in a curve and the right vertical is either short or extends its curl downwards. *Va* is triangular, but its left arm shows a slight notch. *Sa* has a hook on the left, and *ha* either rounds its base or has a gradual bend. In the conjuncts *ya* is of the hooked type as seen in *dhyā*. The *upa-dhmāniya* shows a double loop on a base.

(ii) Pl. XIV. 4 is taken from the Nogawa plates of Dhruvasena II, dated in the (Gupta) year 320 (A.D. 639), and Pl. XIV. 5 is

derived from the Bhavanagar plates of Śilāditya IV, dated in the (Gupta) year 372 (A.D. 691). The predominant feature of these inscriptions is the reduction of the curvature at the lower ends of the verticals. In fact this curvature has almost disappeared in no. 5. This inscription also shows the cursive forms of *ṇa*, *ta*, *tha*, *ya* and *la*. The change in the medial vowels is very remarkable. The circle type of the medial *ī* is replaced by the right curved stroke, and the medial *i* has optionally a left curve along with the circle-type. The medial *ā* in no. 5 is generally a long vertical placed on the right of the letters. The top slants in the medials *e*, *ai*, *o*, and *au* are prominent. The medial *ṛi* shortens its curvature. Of the initial vowels *a* has the hook on the left, *i* has a double curve for its roof, *u* has an upturned base, and *e* is of the foot-type with its mouth wide open. *Ka* has the short mid-bar, *kha* has a small hook placed over a broad looped base, and *ga* shows the head-mark. In no. 5 *ga* is of the angular type, and *gha* is simplified into a form with three straight verticals on a base. *Cha* has an almost pointed beak, and *chha* in no. 5 is a cursive form. *ṣa* has two curves, the upper one being smaller than the lower. The additional hook in *ḍa* is bent downwards, the form coming closer to *ḷa*. The cursive form of *ṇa* is the three-teeth type, as is already known from the conjuncts of North India. The cursive form of *ta* reduces the left angle to a mere line. *Tha* is almost heart-shaped. *Na* is of the looped type. *Ba* has a notch at the upper arm. *Bha* is nearer to the angular form. *Ma* has the loop at the bottom. *Ya* has dropped its left arm completely. *La* extends the upper curl into a circle and reduces the left limb into an unrecognizable shape. *Va* is triangular with a notch at the left arm. *Sa* has the hook on the left, and *ha* has a bend in the base line and a pointed angle on the right. On the whole the writing has become much simplified in no. 5. There are some letters such as *ṇa*, *ta* and *ha* which are similar to the forms in proto-Nāgarī. The medial vowels also incline towards the proto-Nāgarī forms. This tendency to abandon southern features and come in line with the northern character is also to be seen in the later development of the Gujarātī script.

C VI. Deccan

Deccan is the Persianized form of the Sanskrit word *dakṣiṇa*, meaning south. The Muslim historians applied this term to those areas which lay immediately south of the central belt of the

mountainous and forested regions in India, and this special sense of the term is preserved to this day. As it is commonly understood, it excludes Gujarat and Kathiawad in the west, the Tamil and Kannadi areas in the south, and Orissa in the east. The upper central region of the Indian peninsula is, *par excellence*, the historical Deccan, and here I have used the term in this sense. It was really the middle country between the north and the south. Traditions from both directions reached this region and were absorbed. Eastern Malwa was the passage through which northern ideas passed into this region, spread down the Godavari and the Kistna rivers from west to east, and finally trickled into the extreme south. The opposite current from the south to the north flowed in exactly the reverse direction. The intermediary character of this zone is clearly marked in the writing styles that developed here. The northern and southern traditions have equal weight, varying only with the force that keeps them alive. Sometimes there is a happy mixture of the two traditions leading to new forms. It is this last characteristic in the writing style with which we are concerned in this section. I have called it the Deccani style. It appears for the first time in Eastern Malwa, where southern influence had penetrated long before with the Śātavāhana advance into the north. In the fourth century A.D. this writing received a new character by the addition of a square head-mark at the top left of the verticals. This mark, which gave rise to the old term 'box-headed character', is natural neither to pen nor to stylus. Bühler is obviously wrong when he says that the solid squares were due to the pen style and the hollow ones to the stylus. It has been shown in the last chapter¹ that this head-mark is a development from the new pen style of writing that is seen from the first century A.D. onwards in the north. These peculiar heads are no doubt stylized forms of the original head-marks. This is indicated by two factors: (i) the varying shapes of the marks, as seen in the different groups of the inscriptions, depending on a particular form chosen in one region, and (ii) their superfluous nature, having no essential connexion with the actual form of the letters. This is especially true in the inscriptions of the extreme south where the head-mark was hardly understood. As a result no one style of letter-forms could develop in the Deccan inseparably associated with this square head-mark. It remained an ornament to be worn by the different characters first

¹ See above, p. 80.

in Malwa and the Deccan and subsequently in the neighbouring south. But no sooner did the characters evolve new forms than the fashion had to be set aside. This Deccani characteristic had a short life and died a natural death without leaving any trace behind.

Several minor varieties can be distinguished on the basis of how this head-mark was attached to the different characters and the influence, if any, exerted by it on the letter forms.

(a) The Malwa variety of the fourth century A.D. is represented by Pl. XV. 1, taken from the Eran pillar inscription of Samudra Gupta and the Udayagiri cave inscription of Chandra Gupta II, the latter dated in the (Gupta) year 82. This variety has been described in the last chapter.¹ Here it only needs to be pointed out that the forms of all the letters are southern, including also the medial vowels, as is definitely proved by the form of the medial *ri* in *nri*, and the medial *ā* attached to the middle of *mā*. In these inscriptions the head-mark is distinctly given at the top left end of the verticals. If there are two or three verticals in a letter, such as *a*, *gha*, *pa*, *ma*, *ya*, *sha* and *sa*, the square mark is applied to the left one. This mark is also given over the round tops of *tha* and *śa*, but not over *ga*, *ṇa* and *la*. It is seen on the flat top of *dha*, but not over *ṇa*, *ja* and *ṭa*. This head-mark is given separately, and does not appear to have had any other influence on the actual forms of the letters.

(b) Pl. XV. 2 is taken from the Bilsad stone inscription of Kumāra Gupta, dated in the (Gupta) year 96. The inscription is well executed on the stone, and the writing shows the influence of the broad pen style for the first time. The display of the thick and thin strokes, the foot-marks, and the prominent top slants of the medial vowels all speak of a new tendency in writing, seen in North India in the fifth century A.D. This style also affected the head-mark, which is no longer a small square at the top left of the verticals. Here it assumes the form of a solid rectangle with its lower side concave. The verticals hang down from its middle. Both the head-marks and the style of the letters are inseparably related. Unfortunately this style is not known from any other record. The medial vowels are all of the Kushāṇa style, though slightly developed, with the exception of one optional form of the medial *i*

¹ See above, p. 103.

which has a curl at the top. No initial vowels are known from this inscription. Angularity is well marked in the consonants, which are all in the Kauśāmbī style except *ra*, which has the curved tip, the dental *sa*, which shows a hook on the left, *ya* which has dropped its third left arm, and *ha* which maintains its base, two verticals, and a hook. The head-mark is seen over the tops of all the letters except *ba*, and optionally in the case of *ga* and *dha*.

(c) The Malwa variety of the fifth century A.D. is represented by Pl. XV. 3, taken from the Mandasor inscription of Naravarman, dated in the Mālava (Vikrama) year 461, and from the Tumain inscription of Ghaṭotkacha Gupta, dated in the (Gupta) year 116. These inscriptions show a further development of the style known in the fourth century A.D. in this region. The letter-forms preserve the southern character and they are indistinguishable from those described in B IV (a) (ii),¹ except for the head-marks, which are different in the two groups. The forms of the medial vowels are also identical. The initial vowels emphasize their southern character by having the form of *a* with a hook at the left limb, the root-type of *i*, and the form of *e* with a stem. *Ta* is optionally of the Gujarat form with a vertical on the right and an angular hook on the left—a form which later persisted in the proto-Nāgarī of the Rāshtrakūṭas. The square head-mark is small in size. It is regularly given in the Tumain inscription, but in the Mandasor inscription it is transformed into a thick horizontal in many cases. It is found over all the letters except *i*, *kha*, *ja*, *ṇa*, *tha*, *ba* and *śa*. After the fifth century the square head-mark is no longer seen in this region.

(d) *Vākāṭaka inscriptions*. The Vākāṭakas were mainly responsible for developing this Deccani style of writing. All their inscriptions are written in this style, except the Poona copper plate which has hollow triangular head-marks.² Wherever their rule extended, this style spread, and it is found in their inscriptions as far south as Ajanta. Wherever the influence of the Vākāṭakas reached, their writing had its effect on that of later dynasties. We notice its influence in the inscriptions of the Gurjaras of Broach,³ those of

¹ See above, p. 157.

² See above, p. 162.

³ See Sankheda plates of Dadda, dated in the (Kalachuri) year 392 (A.D. 641), *Epigraphia Indica*, vi. 39-40.

the Western Chālukyas, of the Kadambas, of the Pallavas, of the Madharas, and of the Gaṅgas of Kalinga. Within their own kingdom the style had different varieties. (i) The earliest variety is seen in the stone inscription of Vindhyaśakti at Nachne ki Talai (Fleet, nos. 53-54). It has hollow square head-marks, but the letter-forms are not yet affected by angular features. Morphologically the inscription appears to be earlier than the Eran pillar inscription of Samudra Gupta. (ii) The hollow square heads lead on to the hollow triangle, and we have the Poona copper plate of Prabhāvatī Guptā in this type. This inscription and others similar have already been described. (iii) The next variety is of the solid square type. It is illustrated in Pl. XV. 4, taken mainly from the Chakmak copper plate of Pravarasena II. It is this particularly solid square type that is copied in the inscriptions of the neighbouring kings. The solid square may be a regional variety of the solid triangle so much in fashion in the inscriptions of North India. But the idea that this is a regional variation should not be unduly stressed. The letter-forms of the Vākāṭaka inscriptions are entirely different from those of the north. In them we see a development of the style of writing known in the late Śātavāhana records. The hand shows a mixed tendency to both angular and round shapes. The angular shapes are marked in the forms of *a*, *ka*, *kha* (optionally), *ga*, *gha*, *ṭa*, *ḍa*, *ta*, *da*, *dha*, *pa*, *ba*, *ya*, *ra*, *la* (optionally), *va*, *sa* and *ha*. The remainder prefer round shapes. The verticals of *a*, *i*, *ka*, *ra* and the vertical-type of the medial *u* curve their lower ends, while *la* has its right vertical curled to the left. *A* maintains its hook on the left. *I* is of the roof-type. *Ī* has a dot on either side of the vertical. The lower end of the vertical of *u* bends in a broad curve to the right. *E* has a quadrangular body attached to a stem on the right. The medial vowels are all given in the southern style, though sometimes, as in *ai* and *o*, the top slants are also seen. Both medial *i* and *ī* curve to the left, but the latter has an additional upright. The medial *ā* in *mā* and *lā* and the medial *e* in *me* are applied to the middle of the letters, but the medial *e* in *khe* is a top left slant. The medial *u* covers its lower end to the left, but in *tu* it is curved to the right. The medial *ū*, as in *sū*, has an additional stroke to that of *u*. In the case of *ru* the stroke is a mere slant on the right. The medial *ṛi* is a broad curve to the left. The medial *au* is of the curved type of the south. *Ka* has a cross-bar. In *kha* the loop at the lower end of the hook is seen very faintly. *Ga*

has equal arms. The left arm of *gha* is bent, but the base is straight. *Cha* is of the broad type, and *chha* has its left loop bigger than its right one. *Ja* clearly has the two curves with a common central arm. *Ṭa*, *ḍa* and *da* have all angular backs. *Na* and *ṇa* are both looped. *Ta* has an angular hook attached to the right vertical. *Tha* has a curved stroke within an oval. *Dha* is rectangular. *Pa*, *sha* and *ha* have angular bends at the left arms. *Ba* is square. *Bha* is of the broad type. *Ma* has its lower loop tilted to the left. *Ya* is of the tripartite form with its left arm short and slightly curved inwards. *Va* is a rectangular loop attached to the right vertical. *Śa* has equal arms with a mid-line, and *sa* has a hook on the left. *Ha* extends its right hook downwards. The subscript *ya* is of the hooked type. The *upadhmāñīya* takes the form of a Roman 'x' within a square. On the whole the writing shows more similarity to the southern characters than to the northern. Only a very few forms, such as *i* with a curved roof, *e* with a quadrangular loop, *kha* with an insignificant looped base, *ta* with an angular hook on the left, *ma* with its loop tilted to the left, and *va* with a quadrangular loop, are distinctive of this region. But most important is the fact that the solid square head-marks have decidedly influenced the angular forms of the letters. Thus in a sense the square of the head-mark leads to the creation of angular forms.

(iv) The last variety is of the hollow square head-marks (Pl. XV. 5). The large majority of the Vākāṭaka inscriptions are of this variety. These fall into two sub-varieties: those still retaining the round curves of the southern characters, and those which have strictly angular forms. In this period they are defined chronologically, but generally later inscriptions tend towards greater angularity. In the next group we shall see that the angular sub-variety alone survives in this region. In the shapes of the letters, except for the emphasis on angularity, there is no fundamental difference from what we have seen in (iii) above. The medial vowels are also of the same type. But we must note that the roof of the medial *i* is also angular here, the base of *kha* has a small rectangular loop, *ja* has the hollow square head-mark but shortens the upper angular curve, *ṇa* extends the vertical downwards and has a loop on the left, *dha* is almost trapezoidal, an angular bend is seen in the left arm of *ba*, and the loop of *ma* is rectangular and tilted to the left.

(e) *Inscriptions of the kings of Śarabhapura*

These inscriptions have been found in the upper valley of the Mahanadi river, which flows through the jungles of Chhattisgarh and falls into the Bay of Bengal in Orissa. The only well-known historical place in this area is Śrīpura, and it is not unlikely that its older name was Śarabhapura. This region produced two different styles of writing: (i) the one seen in the Arang plates of Bhīmasena II, already described,¹ which shows influence from the north received through the Uchchhakalpas and the Parivrājakas, and (ii) that seen in the Arang plates of Mahā Jayarāja and the Raipur plate of Mahā Sudevarāja (Pl. XV. 6). These inscriptions carry further the angular sub-variety of the hollow square head-mark type of the Vākāṭaka inscriptions; (iii) still later a local angular style developed, as is seen in the Pipardula copper plate of Narendra (Pl. XV. 7), which, properly speaking, is a development from the solid square head-mark type. In this inscription the head-mark is a long solid rectangle, placed on the top left of the verticals. This type may have been borrowed from the Gaṅgas of Kalinga. Between (ii) and (iii) the head-marks are the only distinction. In other respects they exhibit similar features. But there is a definite change in these inscriptions from those of the Vākāṭakas. Firstly, they copy only the later sub-variety of the Vākāṭaka inscriptions, which exhibit a special preference for angularity, and further they are distinguished by their greater stress on the verticality of the letter forms. Secondly, even if these long verticals remain unnoticed, no one can mistake the new influences as seen in the medial vowels and also the forms of some letters—influences which are traceable only to the Gurjara inscriptions of the sixth century A.D. Therefore the date of these inscriptions must lie towards the close of the sixth or the beginning of the seventh century A.D. A still later survival of the hollow square type is seen in the Rajim plate of Tivaradeva, which has been rightly dated by Fleet in the eighth century A.D. (Fleet, no. 81). The new change in the medial vowels is seen in the use of the circle type of the medial *i* and *ī*, which, though known in the inscriptions of Malwa and Gujarat in the fifth century A.D., was not used in this region in the Vākāṭaka records. The Śarabhapura inscriptions must have derived this feature from the Gurjaras, whose influence probably

¹ See above, p. 163.

reached this region after the fall of the Vākātakas. That the influence is from the Gurjaras, and not from the Chālukyas, is proved by the use of at least three letters: *kha* with its larger rectangular looped base, *ta* with its angular hook reduced to a mere line attached to the right vertical, which is slightly curved, and *la* with its upper curve extended downwards. Other minor influences may be traced in the form of *tha* having a loop within a rough oval, the preference for the looped *na* and *ṇa*, the use of the Deccani *la* (not found in the earlier inscriptions of this region), and a new type of the conjunct *jña*, in which *ña* has a loop on the left. It should not be confused with *ṇa*. We may also note the form of the *jihvāmūliya*, which resembles that of *ma*, and the form of the initial *au*, which has a curved base in the 'z'-form with an additional top curve to the right.

(f) So far we have been dealing with the square headed Deccani style within the home country of the Vākātakas and their successors in the jungles of Chhattisgarh. Outside this region the Deccani style influenced the writing in the inscriptions of the Gurjaras, the Chālukyas, the Kadambas, the Madharas, the Pallavas, and the Gaṅgas. Unlike the Vākāṭaka inscriptional writing, here we have only solid squares, except in the Pallava records which have a mixture of solid and hollow squares side by side with thick head-lines. Secondly these inscriptions do not show any preference for angularity, which is marked in the later inscriptions of the Vākātakas. Hence it is legitimate to infer that this influence reached here quite early. The late fourth or the early fifth century A.D. is the most probable time when such a borrowing could have taken place. This is the first stage of influence. In the second stage we find a borrowing from one dynasty to the other, and in the third place we see a development of the style. Thus these inscriptions fall into three categories: (i) those which show influence directly from the Vākātakas, such as the inscriptions of the Kadambas and the Madharas, which may be dated in the late fourth or early fifth century A.D.; (ii) those which borrowed from (i), such as the Kudgere plates of Māndhātṛivarman,¹ the Jirjingi plates of the Gaṅga Indravarman, dated in the (Gaṅga) year 39 (A.D. 535-8), the even later Sankheda plates of the Gurjara Dadda, dated in the (Kalachuri) year 392 (A.D. 641),² the Yekkeri plates of the time of

¹ *Epigraphia Indica*, vi. 14.

² *Ibid.*, pp. 39-40.

Pulekeśin II, and the inscriptions of the Pallava Simhavarman; (iii) those which show a development of a new style, such as the later inscriptions of the Gaṅgas, dated between the (Gaṅga) years 79 and 183.¹

(i) Pl. XV. 8 is taken from the Talgunda pillar inscription of Śāntivarman and the copper plates of Mṛigeśvaravarman. Pl. XV. 10 is derived from the Uruvupalli and Vilavati plates of Simhavarman, the Pallava ruler, which will be described in the next section. Pl. XV. 11 is taken from the plates of Śaktivarman, Umara-varman, and Chandravarman. Of these the Talgunda inscription, being on a stone pillar, shows a high quality of engraving and the letters are clearly brought out, with emphasis on angularity. The head-mark is a mere fashion, and has not at all affected the local forms of the letters. This fact is a great distinguishing feature between the inscriptions of these dynasties and those of the Vākātakas. The writing differs from dynasty to dynasty. We also find in these inscriptions the influence of the stylus, clearly recognized in the notches and the rounded features in *i*, *e*, *kha*, *cha*, *ja*, *ḍa*, *tha*, *dha*, *pa*, *pha*, *ba*, *bha*, *ma*, *la*, *va*, *sha* and *ha*. The medial vowels and the general forms are of the local styles known from other contemporary inscriptions. These will be discussed subsequently, when the general character of all the inscriptions will be taken up.²

(ii) Pl. XV. 9 is taken from the Yekkeri rock inscription of the time of Pulekeśin II. In this as well as other inscriptions of this type the head-mark is again a small square, which does not affect the writing in any way. What is important is to decide the particular dynasty from whose record the style is borrowed. The Yekkeri style is obviously not in the local style of the Chālukyas, as the forms of *a*, *kha*, *ṇa*, *ba*, *ya* and *va* show. In fact in this inscription an attempt has been made to discard the influence of the stylus script. Relying on the forms of the letters, we can find their analogues in the inscriptions of the Gurjaras of Broach. It is from that source that the short curved hook of the letter *a*, the broad loop of *kha*, the looped *ṇa*, and the straight-sided *ba*, *ya* and *va* were derived. The medial vowels adopt the local style.

¹ The Gaṅga era starts somewhere between A.D. 496 and 499.

² See below, p. 182.

(iii) Pl. XV. 12 is taken from the Gaṅga inscriptions of Hastivarman, Indravarman II, Indravarman III, and Devendravarman; dated between the (Gaṅga) years 79 and 183 (A.D. 574 and 680). The square head-mark shows another development in these inscriptions. Here we notice the solid square growing into a broad rectangle, and this mark is placed centrally over the verticals, as in *ka* and *ra*, and over both the verticals in letters like *a* and *ma*. The practice of giving head-marks to both the verticals is inherited from the Madhara records. But there is no doubt that the change of the square head-marks into broad rectangles is a distinctive feature of the later Gaṅga records. It is most probably from this type that the Pipardula plate of the Śarabhapura king derived its style, because in that region the solid square type had long been given up. In this Gaṅga style the influence of the stylus is clearly marked. The letter forms are in the Andhra style, not influenced by that of the Eastern Chālukyas or even by that of the Pallavas. In fact a northern influence is traceable in the open-mouthed type of *ṇa*, *ta* with an angular hook, and *na* with a head on the left. The distinctive letters are *a*, *ka* and *ra*, all of which have a short curve at the lower ends of the vertical, *kha* with a broad looped base, and *la* with a short upper curve. The medial vowels are all in the local style.

In its latest phase the Deccani style developed two distinctive varieties—the first having the hollow square head-mark with angular forms, in Chhattisgarh, and the second the broad solid rectangular head-mark with rounded forms, in Andhra. Both of these varieties survived, as far as we know, only up to the eighth century A.D. The only other region where this style had any effect is the Pallava kingdom, where a new style with angular features appeared.¹

D VII. *Mysore and Maharashtra*

Mysore and Maharashtra, as used here, do not include the whole of the Kannadi- and the Marathi-speaking areas. For the purposes of this study they may be considered as restricted to the upper valleys of the Kistna and the Godavari rivers, where the Śātavāhanas held sway in the early centuries of the Christian era, and where later, between the fifth and the eighth centuries A.D., after the overthrow of the Vākātakas, the Kādambas, the Chālukyas and the Rāshtrakūṭas ruled successively. It must, however, be

¹ See below, p. 201.

remembered that their territories were seldom coextensive with this whole area. Geographically as well as culturally the two valleys of the Kistna and the Godavari are separate zones—the Kistna valley looking to the south and the Godavari to the north—but there have been many interconnexions. The palaeography of the period dealt with here is one such great unifying factor. Indeed, the Śātavāhana style of writing was a common heritage in this whole area, and its development through the successive centuries shows a uniform pattern. Unlike the Northern Deccan, where the tendency had been to discard the curved strokes and revert to straight lines with strokes drawn at an angle, here an attempt was made to draw all the lines as rounded curves, so that even in the shapes of the letters only those features receive attention which are capable of developing into curves. This can be best understood by looking at the curved verticals of *a*, *ka*, *ra* and *la*, the rounded forms of *u*, *kha*, *ga*, *ta*, *tha*, *ra*, *la*, *va*, *śa*, *sha* and *ha*, and the broad curves in some of the medial vowels. The influence of the stylus is seen in some of the letters, but as the writing is known to us only from copper plates, the wavy curves have mostly been straightened. In any case the notches are not so prominent in this style as they are in the stone inscriptions of the Pallavas from Kāñchī, Māmallapuram, and other places in the south. This tendency to curvature is the main feature inherited by the Kannadi writing, to which the styles of this period ultimately led. The palaeography is studied under three main heads:

- (a) The inscriptions of the Kadambas.
- (b) The inscriptions of the Western Chālukyas.
- (c) The inscriptions of the Rāshtrakūṭas.

(a) *The inscriptions of the Kadambas*

There were several branches of the Kadambas, two of which are important from our point of view: (1) the descendants of Mayūraśarman, and (2) the line of Kṛishṇavarman ruling in Banavāsī. Besides these we have a single ruler, Hāritiputa Sivakhaḍḍavarman, who still remains unconnected, but whose Maḷvalli inscription provides a link between the late inscriptions of the Śātavāhanas, especially the one on the same pillar at Maḷvalli, and those of the succeeding Kadambas. These inscriptions may be classed in three sub-groups:

(i) Pl. XVI. 1 is taken from the Maḷvalli inscription of Siva-khaḍḍavarman. The writing bears a close similarity to that of the earlier Śātavāhana inscription on this pillar. One fundamental difference is that the head-mark in this inscription is not generally given, but in some letters, as in *bha*, it appears as a small solid square. The medial vowels are of the same type in both the inscriptions. The medials *ā*, *e* and *o* are horizontal strokes, the medial *ā* in *mā* and *lā* being placed in the middle of the letters. The medial *ai* is two back strokes. The medial *i* is a top stroke with a curled end, and the medial *ī* has an additional prominence, but the upper curl is not so well marked. The medial *u* is a curved stroke. The initial *a* is of the same type with a hook at the left limb and the right vertical curved at the lower end. The initial *u* has its base slightly turned up. The initial *e* now has a stem. A unique form of *ri* is met here. It appears to have been derived from the form of the initial *a*, of which the left hook is assimilated into a loop on this side and the right limb extends its curve upwards with an additional curved stroke on the inner side of this right vertical. The verticals of *ka*, *ra*, and *la* have curved ends. The fish-hook type of *kha* has now an additional arm attached to the bottom left of its long vertical. *Ga* is found with both angular and rounded top. *Cha* is of the broad type. *Ja* has three arms on the right of a vertical. *Da* and *da* have angular backs. The bases of *ṇa* and *na* are now bent at an angle. *Ta* still has the angular form, but *tha* has now a short mid-line in place of the dot. *Dha* has its left arm curved. The left sides of *pa*, *ba*, and *ha* are bent in the middle. *Bha* is of the broad type with a notch in the middle. The lower loop of *ma* is generally triangular. *Ya* is tripartite, but does not have a loop on its left arm. *Va* has a loop attached to a vertical on the right, and *sa* has a hook on the left. The developments seen in some of the letters clearly point to a late date for the inscription, somewhere in the fourth century A.D., and if the square head-marks seen in some of the letters are intentional, it may have to be placed in the second half of that century.

(ii) Pl. XVI. 2 is taken from the Halsi plates of Kākusthavarman and Ravivarman. It depicts the style seen in some of the inscriptions of the line of Mayūraśarman. The other style with square head-marks has already been discussed.¹ There is one more style, known from the Prakrit inscription of Mayūraśarman.² Here the

¹ See above, p. 178. ² *An. Rep. of Mysore Arch. Survey*, 1929, pl. XI, p. 56.

medial vowels are not of the same type as seen in (i) above. They have been executed in a very careless manner, as may be seen in the case of the medial *i*, which is a short curve to the left, and the medial *ā*, which is a short stroke to the right. Three varieties of the medial *ū* have been detected—two curved strokes as in *kū*, an extended curve to the left as in *dū*, and a curl attached to the right arm of *ya* in *yū*. The only angular style is seen in the long verticals of *a*, *ka*, and *ra*, which recall the long verticals of the Ikshvāku writing. The date may be fourth century A.D. But the appearance of odd forms, such as *ka* and *ra*, optionally with short verticals, *ṇa* with a straight base, *ta* with a rounded appendage as seen in the later inscriptions of the Kadambas and the Chālukyas, and *ya* with its middle arm longer than the other two, raises doubt as to the genuineness of the inscription. The photograph is completely blurred and my remarks are based on the neat drawing in the publication referred to above.

The Halsi plates show a developed style of the fifth century A.D. The medial vowels (Fig. 16) now exhibit the southern features. The medial *ā* is a horizontal stroke with a tick at the right end. This tick sometimes extends downwards, as is seen in *yā* and *sā*. The stroke is given in the middle of the letters *dhā*, *bā*, *mā* and *lā*. In *ṇā* the stroke is turned upwards as in the north. The medial *e* is a stroke similar to that of *ā* but placed on the left of the letters. In some cases, as in *ye*, the tick is again extended downwards. In *me* the stroke is placed at the middle, and in *khe* it curves downwards from the left bottom. The medial *i* is generally a circle, but sometimes we also get a left curve, while the medial *ī* has either two circles one within the other or a curve to the right. The medial *u* is either a short curve to the left as in *pu* or a broad curve to the right as in *bhu*. The medial *ū* has an additional short stroke or a downward curved stroke added to that of the medial *u*. The medial *o* is two horizontal strokes with ticks at either end, but in *lo* it is of the cursive type. The medial *au* has the curved form of the south, and the medial *ṛi* is a stroke curving to the left. A new form of the initial *ā* is seen, in which the left hook is assimilated in a closed loop. The initial *i* has its roof doubled. *E* has a stem projecting from the right end of a quadrangular body. The initial *ṛi* shows a development from the Roman 'x'-form seen in the inscriptions of the Western Kshatrapas.¹ Here the lower two

¹ See above, p. 83.

arms are transformed into curved strokes on either side of a middle bar, which has a notch. Some developments are also seen in the consonants: in *kha* the end of the lower horizontal is turned upwards; *ga* and *śa* have flat tops; both *ṇa* and *na* bend their bases. *ta* generally has its two arms meeting upwards in a rounded curve, but a new form having a curved appendage to a vertical is seen for the first time. This is the predominant type in the Chālukyan inscriptions, and henceforward it will be called the curved Chālukyan *ta*. Both *ḍa* and *ḍha* prolong their lower horizontals with a notch in the middle, but *ḍa* maintains the old angular form. *Dha* optionally has the old broad form, but more usually we find the quadrangular form with its upper end slightly narrowed. The left side of *ba* has a deep inward curve. *Ma* has its lower loop almost quadrangular and tilted to the left. The third left arm of *ya* is replaced by a small loop. *La* extends the upper curl downwards. *Va* has a broad loop attached to a vertical on the right. *Śa* is of horseshoe type. *Sha* has a mid-line, and *ha* has a notch at the base. No cursive form of *ṇa*, as used in the conjuncts, is found, but it broadens its upper horizontal with a notch in the middle. The subscript *ya* henceforward is of the hooked type. The *upadhmāṇiya* is a cross within a rough quadrangle.

(iii) Pl. XVI. 3 is taken from Bannahalli plates of Kṛishṇavarman II. It illustrates the style of the sixth century A.D.,¹ as seen in the inscriptions of the Banavāsī branch of the Kadambas. There is a peculiar individualistic tendency of adding small circle-like flourishes to the letters in these plates. Another important change noticeable is the frequency of notches in almost all the horizontal lines, as may be seen in the forms of *e*, *cha*, *ja*, *da*, *dha*, *pa*, *pha*, *ba*, *ma*, *ya*, *la*, *va*, *sha* and *ha*. This is obviously due to the influence of stylus writing. The medial vowels adopt the new forms seen in (ii) above. The new developments in the letters are seen in the following: the lower curve of the initial *a* is extended upwards; *u* is almost a semi-circle; *e* resembles a foot with a slight upward opening of the mouth; both *ga* and *śa* are of the horseshoe type with their left arms slightly curved in; both *ṇa* and *na* now show small angular hooks attached to a vertical; *ta* is of the curved Chālukyan type as well as of the looped variety seen in the Andhra region. The *jihvāmūṇiya* adopts the form of the southern *ma*.

¹ See below, p. 224, for a similar style from Ceylon.

(b) *The inscriptions of the Western Chālukyas*

The Chālukyas obtained their styles of writing from three different sources. Their earliest inscriptions adopt the style seen in those of the Kadambas. Later in the seventh century they borrowed two styles from the Gurjaras of Broach—one having square head-marks (Pl. XV. 9), already described,¹ and the other the usual Gurjara style, as may be seen in Pl. XVI. 6, which is taken from the Nerur plates of Vijayabhaṭṭārikā, of about the middle of the seventh century A.D. The forms in these plates are exactly of the type known from the Gurjara inscriptions, except that the medial vowels sometimes follow the Chālukyan system. Hence no detailed description of this writing is given here. Finally, towards the end of the seventh century A.D., we find a new style developing, which may be termed proto-Kannadi. The Rāshṭrakūṭas adopted this last style of writing in their inscriptions. In all these Chālukyan styles the line head-mark is prominently given.

(i) Pl. XVI. 4 is derived from the Chālukyan inscriptions of the sixth century A.D., and Pl. XVI. 5 from the inscriptions of Pula-keśin II, dated between (Śaka) years 535 and 556. The medial vowels adopt the later forms seen in the Kadamba inscriptions, except the long *i*, which here has a curl attached to the end of a broad curve to the left—a form which appears to have been derived from the curled type of the medial *i* seen in the Maḷvalli inscription. This type is adopted by the Pallavas in their later inscriptions. We also find here the medial *ji*, the form of which is derived from the initial *ri*, as seen in the Kadamba inscriptions. The upper two arms of *ri* are dropped and only the lower portion—a flat top with a curve at either end—is used for this sign. No. 4 is closer to the Kadamba style in having notches at the horizontals, but the tendency in no. 5 is to discard the notches as far as possible. The typical Chālukyan tendencies are more noticeable in no. 5 than in no. 4. In no. 4 the right vertical in *a* optionally has a short curve, but in no. 5 only the extended curve is seen with the left hook shortened. The initial *i* is of the roof type in both, but in no. 5 the lower ends of the roof curve inwards. *U* is of the semi-circle type with the end of the upper arm slightly turned up. *E* is of the foot type. *Ka* has the usual curved vertical. *Kha* develops a loop at the end of the lower horizontal. Both *ga* and *śa* have their left arms curved inwards. *Gha* has its left arm bent

¹ See above, p. 177.

in the middle. *Cha* is of the broad type. *Ja* has the three-armed form with the usual notches. Similar notches can be seen in the lower horizontals of *ṭa* and *da*. Both *ṇa* and *na* have angular hooks placed on the left bottom of a vertical. The curved type of the Chālukyan *ta* is generally seen. Both *tha* and *dha* are almost quadrangular, with their upper ends sometimes narrowed, and *tha* has either a dot, a short line, or a small circle inside. The left arms of *pa*, *pha*, *ba*, *sha* and *ha* are bent. In no. 5 *ba* has a break at this bend of its left arm. *Bha* is of the broad type. *Ma* has its lower loop slightly tilted to the left. *Ya* has a small loop in place of the left vertical. The lower end of *ra* is curved. *Ṛa* has a cross within a rough quadrangle. The curve of *la* is further extended but its left hook is maintained. *ḷa* maintains the old form, and *ḷa* has a vertical line in the middle of a rough quadrangle. *Va* has a quadrangular loop attached to the right vertical. The *upadhmāṇīya* in no. 4 consists of a double loop on a base, while in no. 5 it is a cross within a rough quadrangle, there being no difference between the forms of *ṛa* and the *upadhmāṇīya*. No cursive forms are seen in the conjuncts.

(ii) Pl. XVI. 7 is derived from the inscriptions of Vinayāditya Satyāśraya and Kīrtivarman II, dated between (Śaka) years 611 and 679. Here the medial *ā* has a vertical stroke on the right of the letters, and the medial *ī* has a curled end in the broad curve. The initial *a* loses its left hook and the curve of the right vertical is extended to the top. Another remarkable change is seen in the forms of *ka*, *ra*, and the vertical type of the medial *u*. In all these cases the curves are extended upwards, making actually two verticals. In the case of *ka* the upper vertical is separately given. *Kha* has its end-loop turned outwards. Both *cha* and *chha* have dropped their upper stems. *ṭa*, *ḍa* and *da* have angular backs. *Ta* extends its lower curve farther. The forms of *ba*, *bha* and *ma* are simplified, and *ya* has dropped its left loop. An optional form of *ṛa* replaces the vertical line of the cross by two notches, one in each of the upper and lower arms of the outer quadrangle. *Ṇa*, used in the conjunct *ṇika*, has a notch in the middle of its vertical. *Va* optionally has the triangular loop without the right vertical. Other letters show simplified forms.

(c) *The inscriptions of the Rāshtrakūṭas*

Rāshtrakūṭa writing is a further development of the proto-Kannadi style seen in the inscriptions of the Western Chālukyas.

Pl. XVI. 11, 12 shows its evolution in the eighth century A.D. The influence of the stylus is clearly noticeable. The line head-marks, seen in the Chālukyan style, are also observable. The medial vowels *ā*, *e*, *o* and *ai* have all long verticals. The medial *i* is either of the circle type or has a broad curve on the left, while the medial *ī* has this curve on the right, but in *śrī* the Chālukyan style of a broad curve with a curled end is adopted. The medial *u* has the double vertical, and the medial *ri*, as in *kri* and *nri*, draws its curve from the top. The initial *a* gives prominence to the curve of the right vertical but the left limb first drops its hook, as in no. 11, and later, as in no. 12, is itself reduced to just a line. The roof of the initial *i* in no. 12 lowers a tail on the right side and joins with the right circular dot. The initial *u* prolongs its upper and lower arms, and a third arm is given between them to produce the form of the initial *ū*. *E* maintains the stem. *Ka* has a double vertical in the lower half and its upper vertical slants to the left. *Kha* has a loop at the end of the lower horizontal. *Ga* has its left arm curved in no. 11 but both arms are curved in no. 12. *Ḍa* and *da* are almost the same, and *ṭa* differs only by not having the upper vertical. Both *ṇa* and *na* have the angular hook on the left bottom of a vertical. *Ta* extends the curve of the Chālukyan form farther. *Tha* and *dha* are almost quadrangular. *Ya* has a loop in place of the left arm. *Ra* develops the optional form seen in the Chālukyan inscriptions and shows two contiguous circles with a mid-line running through them. *La* extends the upper curl and reduces the left limb. *Ḳa* also shortens the lower curved stroke almost to a point. *Ḳa* keeps the old form optionally, but another form with loops attached to the upper ends of a broad curve is also seen. *Va* has a loop attached to the right vertical, which is now slanting. *Ṣa* is of the horseshoe type.

D VIII. *Andhra and the neighbouring areas*

The deltaic region of the Godavari and the Kistna forms another zone where we see the beginnings of a different regional writing. But this region was very disturbed politically, and the effects of political changes are clearly stamped on the styles of writing seen here. This zone was under the Śātavāhanas in the second and the early part of the third century A.D. Later in this century the Ikshvākus developed an ornate style of writing. But

this particular style did not leave behind any legacy in the palaeographical field, except that the characteristic long verticals of Ikshvāku writing are seen in some of the inscriptions of the Pallavas and in others its degenerate version is copied. On the other hand, we meet with a sudden corrupt hand in the Mayidavolu plates of Śivaskandavarman and the Kondamudi plates of Jayavarmma, the letters being drawn very crudely, some of them even recalling the inexperienced hand of the Bhattiprolu writing. Obviously the end of Ikshvāku rule was due to a violent outbreak of some local force, probably represented by the Bṛihatphalāyana dynasty, which must have been suppressed by the rise of the Pallavas, after whose ascendancy we meet with a peaceful development for some time. These developments can be studied in the records of the Śālaṅkāyanas and the Vishṇukuṇḍins. But in the fifth century A.D. the square-headed letters of the Vākāṭaka records infiltrated into this region, and in the sixth century the influence of Chālukyan writing is noticeable in the later inscriptions of the Vishṇukuṇḍins (Pl. XVII. 5). At this time the Eastern Chālukyas established themselves in this region and with them the proto-Kannadi forms came in. The Gaṅgas continued the square-headed type in their secluded region north of the Godavari delta, but, towards the close of the 7th century A.D. the proto-Nāgarī writing of the Rāshtrakūṭas began to exert its influence in this region. The Gaṅgas were the first to adopt some forms from this source. On the other side the Pallavas re-established their authority in Kāñchī and perfected a style of writing peculiar to that region. The influence from this source is seen in the inscriptions of the Ānandas. Thus this region has throughout been influenced by extraneous elements, and hence the development of proto-Telugu was delayed. When later we see its evolution, the influence of proto-Kannadi is very marked. The palaeography is described under the following groups:

- (a) The inscriptions of the Bṛihatphalāyanas.
- (b) The inscriptions of the Śālaṅkāyanas and the Vishṇukuṇḍins.
- (c) The inscriptions of the Gaṅgas.
- (d) The inscriptions of the Eastern Chālukyas.
- (e) The inscriptions of the Ānandas.

(a) *The inscriptions of the Bṛihatphalāyanas*

Pl. XVII. 1 is taken from the Kondamudi grant of Jayavarmma, which is the only record of this dynasty published so far. A newly

discovered inscription¹ gives the name of another king Śrīvarman. The writing in the Kondamudi grant is very corrupt and some of the letters have not been properly formed. No head-mark is seen here. The medial *ā*, *e* and *o* are horizontal lines with short ticks at either end. But *e* in *be*, *ā* in *dhā*, and *o* in *mo* are applied to the middle of the letters. The medial *i* is a short curve to the left, and the medial *u* is a short stroke as in *yu* and *tu*. Śātavāhana influence is noticeable in the curves of the verticals in *a*, *i*, *ka*, *ra*, *la*, and the vertical type of the medial *u*. Again, some of the Śātavāhana forms are preserved, e.g. *i* with a vertical and a dot on either side, as is also seen in the earlier cave inscriptions of the south;² *kha* with the lower end of its vertical bent towards the left; the round-backed *ḍa* and *da*; the Deccani type of *ta* as used in the Śātavāhana inscriptions; and the round-bottomed *pa*, *ya* and *gha*. The most crudely drawn forms are *a* with its right vertical drawn separately from the main left-curved body, and having a hook hanging downwards; *e* with the left arm of the triangle missing; *ka* with its middle bar in *ke* slanting downwards to the left; *cha* being of the beak-form with its upper end open; *ja* having the upper two arms drawn together in a curve; *ma* having its top two strokes drawn in a curve and a lower loop detached from the upper curve, but formed with the same sweep of the hand—a type also seen in the Bhattiprolu inscriptions; *la* with its left-hooked part drawn in a curve; *sa* having its left hook separate from the body; and *ha* optionally dropping the right vertical and attaching the hook to the base line. These crude forms are also noticeable in the conjuncts *ṇhu* and *mha*. The forms of *ṇa* and *na* are exactly the same and resemble that of the round-backed *da*. The corners of *o* are rounded; *chha* has hardly any stem and its left loop is triangular; *ḍa* and *da* are round-backed; *tha* is also drawn with one sweep like an oval similar to the form of *dha*; *ba* is a rough quadrangle with its upper arm broken; *bha* is of the broad type; and *va* has a loop attached to a short vertical. The corrupt forms of most of the letters suggest that the highly sophisticated style of the Ikshvākus was hardly known to the writer of these plates.

(b) *The inscriptions of the Śālaṅkāyanas and the Viṣṇukundins*

These inscriptions fall into two groups: (i) the earlier inscriptions of the fourth to sixth centuries A.D., showing an evolution of

¹ *Indian Archaeology, A Review*, 1955-6, p. 23.

² See above, p. 73.

the local forms in Andhra from the late Śātavāhana records; and (ii) the inscriptions of the seventh century A.D., which are clearly influenced by the Chālukyan style of this period.

(i) Pl. XVII. 2 is taken from the Narsapur plates of Vijaya Devavarman and the Kollair plates of Nandivarman, both belonging to the second half of the fourth century A.D. Pl. XVII. 3 is derived from the Kanteru plates of Vijaya Skandavarman (fifth century A.D.), and Pl. XVII. 4 is from the Ipur plates of Mādhavavarman I (late sixth century A.D.). Not much evolution is seen in the letters, and the influence of the stylus is not clearly marked. The head-mark is negligible except in no. 4, which has notched lines. The tendency in this region is to have short curves at the verticals, as may be seen in *ka*, *ra*, the vertical type of the medial *u*, and optionally in *a*, though broad round curves as an influence from the Chālukyan writing appear optionally in *a*, but usually in *la* and the medial *ri*. The features distinguishing this from the Chālukyan style are seen in the circle type of the medial *i* and *ī*, the Deccani type of *ta* with a loop at the left side, both *ṇa* and *na* with their bases bent, the latter sometimes of the looped variety, *tha* with a dot or a short mark within a rough quadrangular form, the tripartite *ya* with its left vertical never uniformly given, and the triangular form of *va*. Other medial vowels follow the common southern pattern. It is important to note that the medial *ā* is sometimes given in the middle of the letters in *thā*, *dhā*, *bā*, *mā*, and similarly the medials *e*, *o* and *ai* hang down from the middle of the letters in *je*, *ṇe*, *dhai*, *bo*, *me*, *mo*, *yo* and *le*. The initial *e* has a stem. *Ka* has the curved mid-bar. *Kha* bends its vertical sharply to the left. *Ga* and *śa* have equal arms and rounded tops, and the former in nos. 3 and 4 has its left arm slightly curved inwards. *Gha* has a straight base with its left vertical bent in the middle. *Cha* is of the broad type, and *ja* has three arms attached to a vertical. Both *ḍa* and *da* have rounded backs, with the lower horizontal of *ḍa* slightly prolonged. The left sides of *pa*, *pha*, *ba*, and *ha* are slightly bent. *Bha* is of the broad type, and *ma* has its lower loop slightly tilted to the left. *Ṇa* in the conjuncts has its vertical bent. The *upadhmāniya* has a cross within an oval. No cursive forms are seen in the conjuncts. The vowelless *m* is indicated by placing a short *ma* at the right bottom of the letters, as in *rttam*. The main evolution in the letters of the different centuries is seen in the extension of the curves, and the prolongation of the verticals in the medials *ā*, *e*, *o* and *ai*.

(ii) Pl. XVII. 5 is taken from the Ramatirtham plates of Indrarvarman and the Chikkula plates of Vikramendravarman II, both of the seventh century A.D. These show the definite influence of late Chālukyan writing. They have thick head-marks, their curves are extended farther, and some of the typical Chālukyan forms are adopted. Among these last the most notable are the medial *ī* with a broad curve having a curled end, *ka* with its lower vertical doubled, *ṇa* and *na* with angular hooks on the left, the curved type of the Chālukyan *ta*, *ya* with a loop in place of the left vertical, *va* with its quadrangular loop attached to a vertical on the right, and the Chālukyan forms of *ra* and *la*. The influence of stylus writing is also seen in the frequency of the notches in the horizontal lines. But along with these Chālukyan features the local forms are also preserved. We have *a* of both the types, with broad and short curves; *ka* also has a short curve along with the double-vertical variety; *kha* optionally has a looped base; and *ta* also is optionally of the looped variety of the Andhra region. Of the other letters the initial *i* has a curved roof, *e* shows a stem, both *ga* and *śa* have their left arms curved inwards, *cha* is of the broad type, and round backs are seen in *ṭa*, *ḍa*, *ḍha* and *da*. A remarkable form among the conjuncts is that of *mme*, in which the lower *ma* lies horizontally.

(c) *The inscriptions of the Gaṅgas*

Pl. XVII. 6 is taken from the Siddhantam plates of Devendravarman, dated in the (Gaṅga) year 195 (A.D. 694), and the Alamanda plates of Anantavarman, dated in the (Gaṅga) year 304 (A.D. 803). These inscriptions show a fundamental difference from the styles of writing seen in the earlier groups. Their square-headed letters¹ betray some influence from the Northern Deccan, and these inscriptions reveal borrowings from the proto-Nāgarī and proto-Kannadi scripts of the Rāshṭrakūṭas. The proto-Nāgarī influence is seen in the form of the initial *i* with two dots above and a line below, the looped form of *ka*, the open-mouthed *ṇa* or its cursive form, and *ta* with its arms meeting in a top curve. The proto-Kannadi influence is seen in the doubled vertical of *ra* and of the vertical-type of the medial *u*, *la* with its upper curl extended downwards to form an almost complete circle and its left limb reduced to a small hook, and *tha* in the conjunct with a small inner

¹ See above, p. 179.

circle. As in the proto-Kannadi style the line head-mark is also found here. Influence may also be detected in the peculiar form of *a* which has the lower half of its right vertical double and the left hook of which is optionally assimilated to the loop on this side. The initial *u* is a semi-circle. *Kha* has a broad triangular base. The left arms of both *ga* and *śa* are curved inwards. *Cha* is of the foot-type without the stem. *Chha* has a triangular loop on the left. *ṣa* optionally loses the third upper arm. *Na* is of the looped variety. The influence of stylus writing is clearly marked in the notches seen in *pa*, *pha*, *bha*, *ma*, *ya*, *va*, *śa* and *ha*. *Mā* shows a unique form with its top mouth closed by the horizontal stroke of the medial *ā*.

(d) *The inscriptions of the Eastern Chālukyas*

The Eastern Chālukyas introduced the Chālukyan style of writing in this region. As seen in the earlier inscriptions, the style is a complete adoption except for the form of the letter *kha*, which has here a looped base, and an evolved form of *ra*, which in one case has the inner cross but usually shows a horizontal line only. The inscriptions fall into two groups:

(i) Pl. XVII. 7 and 8 illustrate the style of the first half of the seventh century A.D., and Pl. XVII. 9 gives the style of the later half of that century. The difference between the two styles is well marked. In the later style the curves are extended farther, the initial *i* develops a tail in its double roof, the medial vowels prolong their vertical ticks downwards, and the lower verticals in *ka* and *ra* are doubled. There is hardly any difference in the form of the letters used in the inscriptions of the Eastern and the Western Chālukyas at this time, except in the two letters mentioned above. Hence the description need not be repeated.

(ii) Pl. XVII. 10 represents the style of the eighth century A.D. Some of the letters are identical with those seen in the Rāshtrakūṭa inscriptions, e.g. the initial *a* with its emphasis on the round curve of its right vertical and the reduction of the left limb into a simple line, and *ka* with its upper vertical given separately from the lower doubled lines. But one also notices in this style a tendency to straight lines, e.g. in the roof of the initial *i*, which shows a short tail on the right, and has a flat top; the initial *u* is also angular, and this angularity is also emphasized in the forms

of *cha*, *ṭa*, *ṇa*, *da*, *na*, *pa* and *bha*. The initial *e* has a short stem, and *o* has a curl at the end of the upper horizontal. The loop of *kha* opens upwards. *Ga* is of the horseshoe type with its left arm curved inwards. *Gha* has a wavy base and its left vertical is bent. *Chha* is very crudely drawn with its two loops hardly touching each other. *Ba* has its left arm deeply curved inwards. The most important distinction from the Rāshṭrakūṭa form is in the case of *la*, which here does not extend its upper curl into a circle and of which the left limb preserves its full hook form. *Ṛa* has a mid-line on which rest two upper loops, while *ḷa* shows a variation in the double-looped form.

(e) *The inscriptions of the Anandas*

Two copper plates of the rulers of this dynasty, illustrated here, are in two different styles. Pl. XVII. 11, taken from the Gorantla plates of Attivarman, recalls the style known from the stone inscriptions of the later Pallavas of Kāñchī, datable from the seventh century A.D. onwards. Pl. XVII. 12, taken from the Matte-pad plate of Dāmodaravarman, illustrates a local Andhra style as evolved further from the inscriptions of the Vishṇukunḍins but not influenced by Chālukya writing. Both inscriptions belong to the seventh century A.D. There is no connexion at all between the writing of these inscriptions and the Ikshvāku style, as has been maintained by several scholars.¹ The medial vowels are all of the seventh century A.D. as seen in the Pallava records (Fig. 16). The double ruled lines in the verticals of *a*, *ka*, *ra*, and the vertical-type of the medial *u*, are clearly inspired by the style of the Pallava stone inscriptions. There are other identical forms in no. 11: the optional type of *ja*, which has a left curl in place of the upper right arm, *ṇa* and *na* with closed loops at their bases, the looped type of *ta*, *la* with a flat top to its extended curl, *śa* with both its arms curved inwards and a short mark within in place of the full length mid-line, and *sha* having its right vertical slightly curved inwards instead of the mid-line. Finally, *ṇa* used in the conjunct *jña* has a loop on the left. The other inscription, no. 12, exhibits stylistic differences. The curves in the verticals of *a*, *ka*, *ra*, and the vertical type of the medial *u* are no doubt extended but do not show any tendency to being ruled. The foot type of *e*, used here, opens its

¹ See D. C. Sircar, *Successors of the Sātavāhanas*, Calcutta, 1939, p. 56.

mouth upwards. *Kha* has no loop at its base. *Ja* has three arms attached to a vertical. *Na* and *na* have their bases bent, and *ta* is of the Deccani style with a curved hook on the right of a vertical. The left arms of *pa*, *pha*, *ba*, *sha* and *ha* are bent. *Ya* has a short curl in place of the third left vertical. *La* does not extend its upper curl too far. Both *śa* and *sha* have full length mid-lines. Notches are seen in the base lines of *e*, *cha*, *da*, *dha*, *pa*, *pha*, *ma*, *ya*, *la*, *va*, *sha* and *ha*.

On the whole these inscriptions tell a disturbed story of the writing styles in this region. The incursions of the Chālukyas shattered the local developments and enforced their own style. However, it has been possible to trace the link between the inscriptions of the Śālaṅkāyanas, the Viṣṇukūṇḍins, and the Ānandas, the last for the first time placed in their true chronological perspective.

South India

The term 'South India' has been used here to denote the area south of the Kistna Valley. It is not a homogeneous region. Sufficient materials are not available from its different parts to give a coherent picture of the styles of writing in use between the fourth and eighth centuries A.D. The main inscriptions are those of the Pallavas, which give neither a continuous genealogy nor a connected development of the palaeography. Various historical factors are responsible for this chaotic development in the region. The coming of the Pallavas itself marks a definite change. It appears that they uprooted the Bṛihatphalāyanas in the Guntur region, as the Mayidavolu plates of Śivaskandavarman are in the same style as the Kondamudi plates of Jayavarṇma, and traces of this style are also seen in the subsequent record found at Hirahadagalli in the Bellary district. But the style of the first record, as I have already remarked in the case of the Kondamudi plates,¹ is a retrogression from the symmetrical writing of the Ikshvākus. The second record recalls the long verticals of the Ikshvāku writing but the hand is still corrupt. However, the connexion of the Pallavas with the Ikshvākus is established by the newly discovered inscription (discussed below) of the Pallava Simhavarman, which copies the degenerate style of the Ikshvāku writing. The next in the series, the British Museum plate, is in the same bad hand, but

¹ See above, p. 187.

shows new types of medial vowels and also some new forms. Then there is a break. We have only a fragmentary record, the Darsi plate, to fill this gap. Here the writing has faint traces of thick head-marks and the letters are well formed. This tendency is very clear in the first Omgodu grant¹ of Vijaya Skandavarman, but the published lithograph of the plate is so bad that no certain details can be derived from it. Then we come to the inscriptions of Simhavarman. We can clearly distinguish three styles in them: (i) the writing seen in the Magdur and Pikira grants, which has thick head-marks and the lower verticals of which have long curves; (ii) the style seen in the Uruvupalli and Vilavati plates, which has hollow or solid square head-marks and shows a preference for angularity, especially noticeable in the lower curves of the verticals; and (iii) the altogether different script of the second Omgodu grant, which is in the proto-Kannadi writing of the seventh to eighth century A.D. The first two styles are easily derivable from the square-headed letters of the Madharas of Guntur region, which have been assigned to the late fourth and early fifth century A.D.² Later still we find two styles persisting in the Pallava records. (iii) is seen in the Chura (sometimes called Narasaraopet) plate of Vijaya Vishṇugopavarman and in the Udayandiram plates of Nandivarman. (ii) henceforward drops its square head-marks, but its other features are continued and further developed in the stone inscriptions of Kāñchī, Mamallapuram and Trichinopoly, and also in the copper plates of later Pallava kings. The proto-Kannadi script is an extraneous writing and its presence here is inexplicable. (ii) also leads on to the development of the Grantha and Tamil characters. This palaeographical analysis does not fit in with the genealogical tables built up by the historians who have tried to reconcile the long genealogies given in the later records of the Pallavas with the fragmentary information contained in the earlier plates. The main difficulty is raised by the plates in proto-Kannadi script. Krishnasastri was the first to suggest a solution. He believed that the Omgodu grant no. 2 'must have been a copy of a grant of the 5th-6th century A.D., put into writing in the 7th century'.³ D. C. Sircar followed in his footsteps and similarly asked: 'What is the objection if we think that the Narasaraopet grant was also an early inscription likewise copied about the same

¹ *Epigraphia Indica*, xv. 251-2.

² See above, p. 177.

³ *Epigraphia Indica*, xv. 252.

time?'¹ If we follow this argument, we have to say the same thing about the Udayandiram plates of Nandivarman, but this question has somehow been missed by D. C. Sircar.² It must be pointed out that the theory of the official adoption of the proto-Kannadi style in this region in the early eighth century A.D. seems rather doubtful, especially when we know that this region had its own style of writing well perfected by this time. One cannot escape the suspicion that the plates are the forgeries of persons unacquainted with the official script of the region. The same remark applies to the Chendlur plates,³ though this last record tries to copy the local style in a very bad hand. If this suspicion is true, the genealogy given in these plates need not be accepted. However, it is not my purpose to try to build up any genealogical table. I shall only describe the palaeography in the chronological groups as analysed above.

(a) The earliest inscription⁴ of the Pallava dynasty belongs to Simhavarman (not illustrated). The writing seen here does not agree with the styles known from the other inscriptions of the Pallavas. As pointed out by D. C. Sircar, it resembles the Ikshvāku writing. But one marked difference is that the present inscription does not show the symmetrical writing of the Ikshvākus. It is possible to point to its counterpart in the second series of the Ikshvāku records,⁵ where the symmetry is not observed. But other differences are also marked. The head-mark in this inscription is more developed than in the Ikshvāku records. Though the lower verticals of *a*, *ka* and *ra* are prolonged, the medial *i* and *ī* do not have the tall signs. On the other hand, the medial *ī*, as applied to *sī*, is turned to the right with an initial prominence. The loop in the forms of *ṇa* and *na* is optionally omitted. *Ya* optionally has a flat base. However, the style is definitely derived from the degenerate writing of the Ikshvākus. It may be dated in the first half of the fourth century A.D.

(b) Pl. XVIII. 1 is taken from the Siroda (Goa) plates of Devarāja, dated in his 12th regnal year, and Pl. XVIII. 2 is derived from the Mayidavolu plates of Śivaskandavarman. Both these plates are described here for the sake of comparison, as the Siroda plates have been referred to the same date as that of Mayidavolu on the ground that they are written in the same style. But a comparison of

¹ Sircar, *Successors of the Sātavāhanas*, Calcutta, 1939, p. 173.

² *Ibid.*, pp. 177-9.

³ *Epigraphia Indica*, viii. 234-5.

⁴ *Ibid.* xxxii, no. 8, pp. 89-90.

⁵ See above, p. 99.

the writings as given in the plates will show that there is hardly any similarity between the two. Of the medial vowels the Siroda plates have the circle type of *i* and *ī*, but in the Mayidavolu plates both are left curves, the medial *ī* having an initial prominence in addition; the medial *o* and *ā* in the former have sometimes long verticals on the right, e.g. in *chā*, *thā*, *bhā*, *mo*, *yo* and *yā*, but not in the latter plates. In the Mayidavolu plates the curved tips are very important and the long verticals are seen in *a*, *ka*, *ra*, and the vertical type of the medial *u*. But in the Siroda plates the tendency is to reduce the curves, and no long verticals are seen—features which compare well with the Gurjara records. Only two initial vowels are used in the Siroda plates: in the initial *ā* the hook at the left limb is not prominent, and *u* is almost an arc of a circle. In the Mayidavolu plates the left hook of the initial *a* hangs separately, the initial *u* has a stem with its lower part curved, and the initial *e* is of the same type as in the Kondamudi plates. In the Siroda plates *ka* has a short vertical with a cross-bar; *ga* optionally curves its left limb upwards; *gha* is tripartite, with no bending at the verticals; *cha* is of the foot type; *ja* has either three arms or two curves joined together, as in the Gurjara records; *ṇa* has its base bent, but *na* is looped; *ta* has its two arms meeting upwards in a curve; *tha* and *dha* have notches at their lower sides, while the first in the conjunct *sthā* has a circle within it; *da* is round-backed; *pa* has lost its base line; *ba* is almost rectangular; *bha* is angular but without the stem; *ma* has a peculiar form resembling the number 8; *ya* is tripartite; *ra* is vertical; *la* in one case is of the Chālukyan type, with its upper curl rounded, and in the other has a short right vertical; *va* is either circular or triangular; *sha* is angular, with a midline; *sa* has a hook on the left; and the base of *ha* is rounded. Conjuncts show cursive forms as in *ṇṇi* and *shpa*. The *upadhmāṇīya* is a rough oval with a short mid-line. These forms do not show a single resemblance to those of the Mayidavolu plates. On the other hand, there is some connexion with the Gurjara and Chālukyan characters. The writing may be regarded as a regional script of Goa, derived mainly from the Gurjara style with influence from that of the Chālukyas. However, it may be pointed out that it bears close resemblance to the sixth century style of writing in Ceylon¹ (Pl. XIX. 11). It may be dated to the sixth century A.D. On the other hand, the letter-forms of the

¹ See below, p. 223.

Mayidavolu plates agree with those of the Kondamudi plates with only this difference, that the forms of the latter do not emphasize the curved tips or show the long verticals. Exact correspondence is seen in the forms of *ke*, *kha*, *ga*, *chha*, the corrupt *ja* (optional in the Mayidavolu plates), *ṭha*, *ḍa*, *ḍa*, *ṇa*, *ṇa*, the Deccani form of *ta* (though the Mayidavolu plates have also the looped *ta*), *ma*, *la*, *sa* and *ha*. Similarly, conjuncts are rare in both, the only one of frequent occurrence being *mha* and *nha*. Of the different forms the Mayidavolu plates have a better type of the initial *a*, the foot type of *cha*, the three-armed type of *ja* (optional), the rare *ṇa* with its curved tip, *ṭa* with a straight back, *ṭha* with an inner dot, *pa* and *ba* with their left limbs bent, *bha* of the broad type, the tripartite *ya* with a straight base and its left arm slightly curled, and the triangular type of *va*. This difference is mainly because the Mayidavolu plates exhibit a slightly better hand than the Kondamudi plates.

(c) Pl. XVIII. 3 is taken from the Hirahadagalli inscription of Śivaskandavarman. The writing shows the same bad hand as in the Mayidavolu inscription, though the corrupt forms of *ja*, *ma* and *sa* are not found here. On the other hand, we find here some new forms. The long verticals, the curved tips, and the same type of the medial vowels, as seen in the Mayidavolu plates, are found here. Of special interest are the following features: the left stroke in *jo* is marked at the middle of the letter; the stroke of medial *ā* in *ṇā* is attached to the right bottom; the mediale in *be* and the medial *o* in *mo* are given in the middle of the letters; and in *lo* the medial *o* shows the cursive type of the south. The curve of the medial *u* is turned to the left in *khu*, *ḍu*, *du*, *nu* and *pu*, but it is turned to the right in *gu*, *tu* and *bhu*, and optionally in *ku*. The form of *ke* with its mid-bar slanting downwards to the left is the same in the Kondamudi, Mayidavolu, and Hirahadagalli plates. The initial *a* has two types—one with the hook on the left, while the second has on this side a loop with its mouth open. This second type appears later in the Grantha writing, as seen in the inscriptions of An-namalai and Mamallapuram. *I* is of the three-dot type with one dot above. *U* is of the late Śātavāhana form with its base gently turned upwards. *E* is of the triangular form with its two lower corners rounded. It has no upper stem. The cross-bar of *ka* has curled ends, as also in the Mayidavolu plates—a feature which persisted in this region and was widely adopted in the later Grantha

writing. *Kha* has a quadrangular looped base. *Ga* has equal arms and a rounded top, and one optional form has the lower ends of the arms curved inwards. The left arms of *ga*, *pa*, *pha*, *ba*, *va* and *ha* are bent. *Cha* is of the foot type. *Ja* has three arms on the right. *Ta* has a pointed back. *Tha* has its lower side straight. Both *ḍa* and *da* have rounded backs, as in the Mayidavolu plates. *Na* is of the open-mouthed type and shows the same method of applying the medial *ā* as is seen in the Allahabad pillar inscription of Samudra Gupta and the Susunia rock inscription of Chandravarman.¹ This is the earliest appearance of this type in the whole of the south and the only example of its use in this region. Its adoption is explained by the fact that in the Kondamudi and Mayidavolu plates we do not find a separate sign for *ṇa* and *na* distinct from that of *da* and *ḍa*. If this letter is crucial, the date of this inscription cannot be earlier than that of the Allahabad pillar inscription. *Ta* is of the Deccani type. *Tha* has a dot within an oblong form. *Dha* is a rough quadrangle, but also has the late Śātavāhana form with an arc added to the sides of a triangle. The base of *na* is bent. The optional form of *ba* has its left arm deeply curved inwards. *Bha* is of the broad type. The loop of *ma* is slightly tilted to the left. *Ya* is of the tripartite form, with its third left arm sometimes curled inwards and sometimes almost dropped. *Ra* optionally has the serpentine vertical. *La* has its right vertical curved to the left. *Va* is either triangular or round. *Sa* has a hook on the left. The vowelless consonant, as *m* in *ddham*, is placed at the right bottom. In the conjuncts the tendency is to write the second letters with a cursive hand, but no cursive forms are developed, except the optional form of *tha* which draws the end of the circle inwards instead of giving the dot separately within the circle. This inscription has been placed by most palaeographers in the first quarter of the fourth century A.D. But the forms of the open-mouthed *a*, the foot type of *e*, the quadrangular looped base of *kha*, the open-mouthed *ṇa* with the medial *ā* attached to its right bottom, the deeply curved left arm of *ba*, and the cursive medial *o* in *lo* raise doubts as to the validity of this dating. If these forms are at all indicative, its date should be in the second half of the fourth century A.D.—a view which was expressed long ago by Fleet.²

(d) Pl. XVIII. 4 is taken from the British Museum plate of Vijaya

¹ See above, p. 101.

² *Bombay Gazetteer*, vol. 1. II, p. 319.

Skandavarman. The writing in this inscription is still poor, but remarkable developments are seen in the forms of the letters. No trace of the special forms of letters used in the two earlier plates of the Pallavas is found here. The characteristic long verticals of the old records are also absent. On the other hand, we find a definite change in the use of the new type of medial vowels. The circle type of the medial *i* and *ī* is seen for the first time, though the old form of the medial *ī* persists in *vi*. The medial *e*, as applied to *chhe*, *te* and *de*, has a curled end, the vertical of the medial *ā* in *chā* is extended, and the left stroke of the medial *ū* in *lū* also curves downwards. We may also note the new forms of the letters—the additional stroke of the initial *ā* is given with the same sweep of the hand as the curving of the right vertical; both *ṇa* and *na* have their bases bent, while the two upper horizontal curves of *ṇa* have curled ends. The Deccani type of *ta* is rarely used; we find either the looped *ta* or the form in which the two arms meet upwards in a curve. The dot of *tha* is now replaced by drawing in the end of the circle, as is the practice in Central India. Most unusual is the occurrence of the bipartite *ya* (only once), and this may be a chance development from the tripartite form with a loop at the left arm generally used in this inscription. Hence the single occurrence of the bipartite *ya* should not be taken as of great chronological significance. Two other letters adopted from Northern Deccan are *la* with a form like that of double *ṭṭa*, and *la* with its upper curl extended around the bottom of the letter. Of the remaining forms *kha* does not have a loop at the base but a horizontal line, the lower ends of *ga* are slightly curved inwards, *cha* is of the broad type with a stem, but *chha* has no stem at all, and *ja* optionally shows the double curve of the Gujarat region. There is no change in the remaining letters. These changes suggest the arrival of new traditions from Central India, and if this is the case the dating of this inscription should fall in the beginning of the fifth century A.D. Some of these forms are also seen in the Kadamba inscriptions of the fifth century A.D.

(e) Pl. XVIII. 5 is derived from the fragmentary Darsi plate issued by a great grandson of Vīrakūrcha. The change in the writing of this inscription again is remarkable. For the first time we see faint traces of thick head-marks, recalling the square head-marks of the Northern Deccan. The curvature in the lower ends of the verticals of *ka*, *ra*, the vertical type of the medial *u*, and the

subscript *ya* is extended upwards in such a way that the lines are almost doubled, recalling a similar practice in the early Chālukyan inscriptions. The medial vowels also show some changes. The circle type of the medial *i* is used as in (*d*) above; the medial *ī* has a broad curve to the left with a curled end, as is known only from the Chālukyan inscriptions. From the same source we can derive the curved type of the medial *au* as applied to *pau*. The features which bear close similarity to early Chālukyan forms are: *ga* with its left arm curved inwards; *ja* with its upper and lower arms waved; both *ṇa* and *na* having an angular hook attached to the left bottom of a sloping vertical; *dha* with its upper end narrowed and its base having a notch; the frequency of notches seen in the forms of *pa*, *ba*, *ma*, *va* and *ha*; *ba* with a break in the curved left arm; *ma* with its loop tilted to the left; *la* with its upper curl extended downwards; *va* with a quadrangular loop attached to the right vertical (optionally); and *śa* with its left arm curved inwards. But there are three forms different from the Chālukyan—here we have a local form of the looped *ta*, and *śa* and *sha* similarly are of local forms with a short mid-bar. With so many similarities to the early Chālukyan forms, this inscription should be dated in the early sixth century A.D.

(*f*) To the same century belongs the style of writing seen in the inscriptions of Simhavarman: (i) Pl. XVIII. 6 is derived from the Magdur and Pikira plates of this ruler, and (ii) Pl. XV. 10 is taken mainly from his Vilavati plates, but his Uruvupalli grant has also been consulted. Both these groups of inscriptions come after (*e*) above, and we shall see some links between the forms of these groups and those of (*e*). But there is one fundamental difference between (*e*) and (*f*): while the forms of (*e*) are derivable from those of the early Chālukyan records, those of (*f*) can be traced to the inscriptions of the Madharas which have been assigned above to the fifth century A.D.; but these Pallava inscriptions are later developments from those of the Madharas, as many new tendencies suggest. However, in general the forms are connected with those seen in the Andhra region, though here the local features are much more clear. These local features mark a gradual development through the British Museum plate, the Darsi record, and the inscriptions of the present group. There is one more distinction between (*e*) and (*f*): the former has very faint traces of thick head-

lines, but in the latter the head-marks are very prominent. (i) has thick head-lines, and (ii) has square head-marks—both solid and hollow varieties indiscriminately used. There is a stylistic difference between (i) and (ii), the former having rounded curves, and the latter preferring angular features, the lines being almost doubled in *a*, *ka*, *ra*, and the vertical-type of the medial *u*. It seems that the square shape of the head-marks had an important influence on the angular forms of the letters, and the result was the development of a distinct local variety, as is clearly evident from the writing in the Vilavati plates. These angular features are not the same as those observed in the later Vākāṭaka records or in the inscriptions of the Śarabhapura kings.¹ It is this angular variety which becomes distinctive of the area, and is easily distinguishable from the broad curves of the proto-Kannadi script or those of the Andhra region. This variety persists in the stone inscriptions and the later copper plates.

The medial vowels used in these inscriptions suggest a borrowing from the Andhra region. The most important are the circle type of the medial *i* and *ī*, though the broad curve with a curly end for the medial *ī* is also used optionally. For the first time in this region we see the broad curve to the right for the medial *u* and *ū*, as applied in *gu*, *bhu* and *bhū*. *Au* in *pau* is the curved type of the south. The medials *ā*, *e* and *o* sometimes have long verticals as in *ye* and *shā*. The lower stroke of the medial *ai* is generally given at the left bottom as in *thai*. The initial *a* has a hook on the left. *U* has a short stem above the curved form. *E* roughly corresponds with the foot type, in one case its mouth opening upwards. The corners of *o* are rounded, while *au* has an additional curved stroke added to the form of *o*. The cross-bar of *ka* has its ends curved inwards. *Kha* has a looped base, but the arms of *ga* do not curve in. *Gha* has a straight base. *Cha* is of the broad type and has a stem. The left loop of *chha* is bigger and angular. *ṣa* has three arms on the right. Both *ḍa* and *da* have rounded backs in (i). *ṇa* and *na* have their bases bent in one type. The other type of *ṇa* shows the angular hook on the left as in (e) above. We have also looped varieties of *na* and *ta*. Only in the Magdur plate do we find optionally used the curved type of the Chālukyan *ta*. *Tha* has a short mark within a quadrangular form. Another variety is heart-shaped, both in *tha* and *dha*. A short mid-stroke is given to *śa* and *sha*. The left arms of

¹ See above, p. 176.

pa, *sha*, *pha*, *ba* and *ha* are bent, and notches can be seen in their lower arms. *Bha* is of the broad type. The lower loop of *ma* is generally not tilted to the left. *Va* is either triangular, or has a broad loop attached to the right vertical. A new type of *la* seen in (ii) resembles the form of *pha* with a tail hanging down. The *upa-dhmānīya* in (ii) shows a cross within an oval. No cursive forms are seen in the conjuncts. These forms suggest that the inscriptions should be dated in the middle of the sixth century A.D. (iii) There is another series of inscriptions which are unmistakably derived from the proto-Kannadi forms of the later Chālukya and early Rāshtrakūṭa records. Pl. XVIII. 7 is taken from Omgodu no. 2 grant of Siṃhavarman (sometimes spelt Siṅhavarman) and the Chura plates of Vijaya Viṣṇugopavarman. Pl. XVIII. 8 is taken from the Udayandiram plates of Nandivarman. Both these groups exhibit similar features and they should be dated in the end of the seventh or the beginning of the eighth century A.D. The forms in these inscriptions are closely comparable with Pl. XVI. 11, 12, which are from the inscriptions of the Rāshtrakūṭas, and Pl. XVII. 10 from the inscriptions of the Eastern Chālukyas. The form of the letter *kha* with a small end loop suggests that this type has been taken from the western source rather than from the eastern. It is needless to describe the details once again.

(g) In this group we have the last series of the stone inscriptions as developed from the writing seen in (f) (ii) above. One fundamental difference is that the square head-marks are no longer given, but the same type of angularity in the long curves is to be noticed. The vertical lines appear to have been ruled. Another great change is seen in the evolution of a large number of local forms. These inscriptions should be dated in the seventh to eighth century A.D. Pl. XVIII. 9 is taken from Panamalai inscription; Pl. XVIII. 10 is derived from Annamalai inscriptions of the time of Parāntaka, dated in the Kali year 3871 (A.D. 770); Pl. XVIII. 11 is taken from Trichinopoly cave inscriptions; and Pl. XVIII. 12 is taken from stone inscriptions at Mamallapuram. Some of these inscriptions show much influence of stylus writing. Though some extraneous forms, such as the open-mouthed *bha* and *sa* and the extended curl of *la*, are obviously taken from the Rāshtrakūṭa records, the importance of these inscriptions lies not in these forms, but in the development of the local varieties which directly pave the way for the later

Tamil. The medial vowels are here fully developed. The medial *ā* is a long vertical on the right, but the medial *e* gently curves its vertical on the left and has its end slightly curled. In the case of *jā* the medial stroke is curved upwards. The medial *o* combines the strokes of *ā* and *e*. The medial *ai* has an additional curved stroke attached to the bottom of the medial *e*. The medial *au*, as seen in *pau*, combines the strokes of *ā* and *ai*. The medial *i* is of the circle type, but the medial *ī* has the broad curve with a curled end. The medial *u* and *ū* in *gu*, *bhu* and *bhū* are always broad curves to the right, but in other letters the medial *u* is of the vertical type. The medial *ri* is a curve to the left as in *nri*, or to the right as in *kri*. The initial *a* has a double vertical on the right, and on the left either a loop or a triangle with its mouth open. The roof of the initial *i* is notched and a tail drops from its right end to join the dot on the right. The foot type of the initial *e* now opens its mouth on the right, has a loop at the base, and curves the right arm downwards. *Ka* has a double vertical and its cross-bar has curled ends, but in the Mamallapuram inscriptions this form of the cross-bar is replaced by a loop on the left and an angular hook on the right, recalling the looped type of the proto-Nāgarī *ka*. The left arm of *ga* curls upwards in the inscriptions of Panamalai and Annamalai. The left arm of *gha* is bent, but the base is straight. *Cha* is of the foot type with its mouth optionally open at the top. The three arms of *ja* are very rarely seen. Generally its uppermost arm is turned to the left with a notch in the middle and a curled end, while the vertical gently bends and absorbs the middle arm, and the lowest arm optionally has a loop. *Na*, as used in the conjuncts, maintains its proper form. *Na* shows double loops at the base with its vertical divided into two lines, but the other variety with the base curved is also seen. *Ta* is of the looped type. *Tha*, *sa* and *sha* have inner short strokes. The forms of *tha* and *dha* are the same—a rough quadrangle with a notch in the lower arm. Very rarely *dha* narrows its upper end. *Da* has a rounded back. The base of *na* is curved but optionally is of a looped variety. *Pa* has rounded corners with notches at the arms. The rectangular *ba* has its upper side turned to the left with a notch in the middle and a curled end, as in *ja*, and the middle left arm slopes to the left. As a result we have a form resembling 'z' with an additional vertical standing at the end of the lower horizontal. Along with the open-mouthed *bha* of the north here we also find the broad type of the south. *Ma* has the usual

loop at the bottom. *Ya* is of the tripartite type with its left arm sometimes curled, looped, or joined with the middle arm. *Ra* has a double vertical. *La* extends its upper curl downwards but optionally has a flat top. *Ḷa* either adopts the Rāshtrakūṭa form which replaces the lower curve by a short line, or shows a broad curve added to the form of *ṭa*. *Va* is triangular with its lower corners rounded and base notched. *Ṣa*, like *ga*, optionally curls the left arm upwards, but in other cases both the arms are curled inwards. *Sa* is either of the open-mouthed variety of the north or of the hooked type. *Ha* optionally extends its right hook downwards. In the Trichinopoly cave inscriptions *ja* in the conjunct *jña* recalls the corrupt form used in the Mayidavolu plates. *Kha*, as seen in the conjunct *khya*, opens the mouth of its looped base and its upper curve has a curled end. The other conjuncts use the full forms of the letters. These inscriptions have introduced many new forms, but at the same time maintain the link with the earlier inscriptions of this region. The northern forms, mentioned in some cases, should be traced to the proto-Nāgarī letters of the Rāshtrakūṭa inscriptions.

BIBLIOGRAPHY

The following list follows the arrangement of the plates illustrated.

PLATE X

1. (i) Allahabad pillar inscription of Samudra Gupta, Fleet, *C.I.I.* iii. 6-10.
 (ii) Udayagiri cave inscription of Chandra Gupta II, *ibid.*, p. 35.
 (iii) Gadhwa stone inscription of Chandra Gupta II, dated (Gupta) year 88, *ibid.*, pp. 37-38.
 (iv) Bhita clay seal, *An. Rep. A.S.I.*, 1911-12, pl. XVII. 20.
 (v) Basarh clay seal of Dhruvasvāminī, *ibid.*, 1903-4, p. 107.
 (vi) Sahet-Mahet seals and sealings, *ibid.*, 1910-11, pl. XIb.
2. (i) Karamdanda inscription of Kumāra Gupta I, *Epigraphia Indica*, x. 71.
 (ii) Bhitari pillar inscription of Skanda Gupta, Fleet, *C.I.I.* iii. 53-54.
3. (i) Gadhwa stone inscription of Kumāra Gupta I, *ibid.*, p. 40.
 (ii) Gadhwa stone inscription of Kumāra Gupta I, dated (Gupta) year 98, *ibid.*, p. 41.
 (iii) Mankuwar stone image inscription of Kumāra Gupta I, dated (Gupta) year 129, *ibid.*, pp. 46-47.
 (iv) Bihar stone pillar inscription of Skanda Gupta, *ibid.*, pp. 49-50.
 (v) Kahaum stone pillar inscription of Skanda Gupta, dated (Gupta) year 141, *ibid.*, p. 67.

- (vi) Sarnath inscriptions of Kumāra Gupta II, *An. Rep. A.S.I.*, 1914-15, pl. LXIX.
- (vii) Banaras stone pillar inscription of Budha Gupta, *J.A.S.B.*, 1949, p. 6.
- 4. *The Maukharis of Magadha*
 - (i) Barabar Hill cave inscription of Anantavarman, Fleet, *C.I.I.* iii. 222-3.
 - (ii) Nagarjuni Hill cave inscription of Anantavarman, *ibid.*, pp. 224-5.
 - (iii) Nagarjuni Hill cave inscription of Anantavarman, *ibid.*, p. 227.
- 5. (i) Amauna (Gaya district) plate of Mahārāja Nandana, dated (Gupta) year 232, *Epigraphia Indica*, x. 50-51.
- 6. *The Maukharis of Kanauj*
 - (i) Haraha stone inscription of Īśānavarman, dated (Vikrama) year 611, *Epigraphia Indica*, xiv. 115-18.
 - (ii) Asirgadh copper seal of Śārvavarman, Fleet, *C.I.I.* iii. 220.
 - (iii) Jaunpur stone inscription of Īśvaravarman, *ibid.*, pp. 229-30.
 - (iv) Two Maukhari seals from Nalanda, *Epigraphia Indica*, xxiv. 285.
 - (v) Sohnag terracotta seal of Avantivarman, *ibid.* xxvii. 64-65.
- 7. (i) Bodhgaya inscription of Mahānāman, dated (Gupta) year 269, Fleet, *C.I.I.* iii. 276-7.
- (ii) Bodhgaya image inscription of Mahānāman, *ibid.*, p. 279.
- 8. (i) Madhuban plate of Harshavardhana, dated (Harsha) year 25, *Epigraphia Indica*, vii. 157-8.
- (ii) Banskhera plate of Harshavardhana, *ibid.* iv. 210-11.
- 9. (i) Spurious Gaya copper plate of Samudra Gupta, dated (Gupta) year 9, Fleet, *C.I.I.* iii. 256-7.
- 10. (i) Aphsad stone inscription of Ādityasena, *ibid.*, pp. 202-5.
- (ii) Shahpur stone inscription of Ādityasena, *ibid.*, p. 210.
- 11. (i) Deobarnark inscription of Jīvitagupta II, *ibid.*, pp. 215-17.
- 12. (i) Nalanda stone inscription of Yaśovarman, *Epigraphia Indica*, xx. 43-44.

PLATE XI

- 1. (i) Susunia rock inscription of Chandravarman, *Epigraphia Indica*, xiii. 133.
- 2. (i) Dhanaidaha copper plate of (Gupta) year 113, *ibid.* xvii. 347-8.
- (ii) Kalaikhuri copper plate of (Gupta) year 120, *I.H.Q.*, 1943, pp. 21-24.
- (iii) Damodarpur copper plate of (Gupta) year 124, *Ep. Ind.* xv. 130 ff.

- (iv) Damodarpur copper plate of (Gupta) year 128, *Ep. Ind.* xv. 133 ff.
 - (v) Baigram copper plate of (Gupta) year 128, *ibid.* xxi. 81 ff.
 - (vi) Paharpur copper plate of (Gupta) year 159, *ibid.* xx. 61 ff.
 - (vii) Damodarpur copper plate of (Gupta) year 163, *ibid.*, xv. 135 ff.
 - (viii) Damodarpur copper plate of the time of Budha Gupta, *ibid.*, pp. 138 ff.
3. (i) Gunaighar copper plate of Vainya Gupta, dated (Gupta) year 188, *I.H.Q.*, 1930, pp. 53-56.
 - (ii) Damodarpur copper plate of (Gupta) year 224, *Ep. Ind.* xv. 142-3.
 - (iii) Faridpur copper plate of Dharmāditya, *Indian Antiquary*, xxxix. 195 ff.
 - (iv) Faridpur copper plate of Dharmāditya, *ibid.* xxxix. 200-1.
 - (v) Mallasarul copper plate of Gopachandra, *Ep. Ind.* xxiii. 159-61.
 - (vi) Faridpur copper plate of Gopachandra, year 18, *Ind. Ant.* xxxix. 204 ff.
 - (vii) Ghughrahati copper plate of Samāchāradeva, *J.A.S.B.*, 1910, pp. 435-6.
 4. (i) Nidhanpur copper plates of Bhāskaravarman, *Ep. Ind.* xii. 73-76.
 - (ii) Tippera copper plate of Lokanātha, *ibid.* xv. 306-9.
 - (iii) Kailan copper plate of Śrī Dhāraṇa Rāta, *I.H.Q.*, 1947, pp. 237-41.
 5. (i) Ashrafpur copper plates of Devakhaḍga, *M.A.S.B.* i, no. 6, pp. 89-91.
 - (ii) Deulbari Image inscription of Mahādevī, *Ep. Ind.* xvii. 359.
 6. (i) Bodhgaya inscription of Dharmapāla, year 26, *J.A.S.B.*, 1908, p. 102.
 - (ii) Khalimpur copper plate of Dharmapāla, *ibid.*, 1894, pp. 53-58.
 - (iii) Mungir copper plate of Devapāla, year 33, *Ep. Ind.* xviii. 304-7.
 - (iv) Two newly discovered copper plates of Bhavadeva from the Salban Vihāra, Mainamati, unpublished.

Nepal

For the Nepalese inscriptions I have relied upon the new Italian publication, *Nepalese Inscriptions in Gupta Characters* by R. Gnoli, Roma, 1956, which contains good photographs. It has been referred to here by the name of the author.

7. Gnoli, nos. I, III, IV, VI, VIII, IX, and X, dated between the (Śaka) years 386 and 427.
8. Gnoli, nos. XI-XXII, dated between the (Śaka) years 428 and 516.
9. Gnoli, nos. XXIV-XXX, XL, and LVII, dated between the (Śaka) years 517 and 535, and in the (Harsha) year 59.

10. Gnoli, nos. LIX, LXI, LXII, LXVII, LXIX, LXX, and LXXII, dated between (Harsha) years 60 and 95.
11. Gnoli, nos. LXXIII, LXXVI, LXXVII, and LXXXI, dated between (Harsha) years 103 and 159.

PLATE XII. *Mathura and the North-west region*

1. (i) Mathura inscription of Chandra Gupta II, dated (Gupta) year 61, *Ep. Ind.* xxi. 8-9.
(ii) Mathura inscription of Chandra Gupta II, Fleet, *C.I.I.* iii. 26-27.
2. (i) Mathura inscription of Kumāra Gupta I, dated (Gupta) year 113, *Ep. Ind.* ii. 210.
(ii) Mathura inscription of the time of Kumāra Gupta I, dated (Gupta) year 135, Fleet, *C.I.I.* iii. 263.
3. (i) Mehrauli iron pillar inscription of Chandra, *ibid.*, p. 141.
4. (i) Indor (Anupshahar district, U.P.) plate of Skanda Gupta, dated (Gupta) year 146, *ibid.*, pp. 70-71.
5. (i) Shorkot inscription of (Gupta) year 83, *Ep. Ind.* xvi. 15.
6. (i) Kura inscription of the time of Toramāṇa, *ibid.* i. 239-40.
7. (i) Tusam (Hissar district, Punjab) inscription, Fleet, *C.I.I.* iii. 270.
8. (i) Nirmand (Kangra district) plate of Samudrasena, year 6, *ibid.*, pp. 288-9.
9. (i) Gūm (Guh) stone inscription of Sāmanta Āshādhā Deva, J. Ph. Vogel, *Antiquities of Chamba*, A.S.I., Calcutta, 1911, p. 146.
(ii) Panali Nala rock inscriptions, *ibid.*, nos. 1-4, p. 137.
10. LÜDERS, H., *Bruchstücke der Kalpanāmaṇḍitikā Des Kumāralāta*, Leipzig, 1926.
11. HOERNLE, RUDOLF A. F., *Bower Manuscript*, A.S.I., Calcutta, 1893-1912.
12. MÜLLER, F. MAX, and NANUIO, B. *The Ancient Palm Leaves (Horiuzi Palm Leaf MSS.), Anecdota Oxoniensia*, vol. i, pt. iii, Oxford, 1884, with an appendix on palaeography by G. Bühler.

PLATE XIII. *Central India and Rajasthan*

1. (i) Udayagiri cave inscription of (Gupta) year 106, Fleet, *C.I.I.* iii. 258-9.
2. (i) Bihar Kotra inscription of Naravarman, dated (Vikrama) year 474, *Ep. Ind.* xxvi. 131-2.

- (ii) Gangadhar inscription of Viśvavarman, dated (Vikrama) year 480, Fleet, *C.I.I.* iii. 74-76.
3. (i) Sanchi inscription of (Gupta) year 131, *ibid.*, pp. 261-2.
(ii) Mandasor inscription of Govinda Gupta, dated (Vikrama) year 524, *Ep. Ind.* xxvii. 15-16.
(iii) Mandasor inscription of Kumāra Gupta and Bandhuvarman, The Mālava (Vikrama) years 493 and 529, Fleet, *C.I.I.* iii. 79-84.
4. (i) Eran pillar inscription of Budha Gupta, dated (Gupta) year 165, *ibid.*, p. 89.
5. (i) Eran Boar inscription of Toramāṇa, *ibid.*, pp. 159-60.
6. (i) Gwalior inscription of Mihirakula, *ibid.*, pp. 162-3.
7. (i) Mandasor pillar inscription of Yaśodharman, *ibid.*, pp. 146-7.
(ii) Another Mandasor inscription of Yaśodharman, *ibid.*, pp. 149-50.
(iii) Mandasor inscription of Yaśodharman and Viṣṇuvardhana, dated Mālava (Vikrama) year 589, *ibid.*, pp. 152-4.
8. (i) Vasantagadh inscription of Varmalāta, dated (Vikrama) year 682, *Ep. Ind.* ix. 191-2.
9. (i) Nagda (Udaipur) inscription of Aparājita, dated (Vikrama) year 718, *ibid.* iv. 31-32.
(ii) Jhalrapatan (Rajasthan) inscription of Durgāṇa, dated (Vikrama) year 746, *Ind. Ant.* v. 181-2.
10. (i) Kanaswa (Kota state) inscription of Śivagaṇa, dated Mālava (Vikrama) year 795, *ibid.* xix. 57-59.
11. (i) Buchkala inscription of Nāgabhaṭa, dated (Vikrama) year 872, *Ep. Ind.* ix. 199-200.
12. (i) Barah copper plate of Bhojadeva, dated (Vikrama) year 893, *ibid.* xix. 17-18.

PLATE XIV. *Kathiawad and Central India**Kathiawad*

1. (i) Junagadh rock inscription of Skanda Gupta, dated (Gupta) years 136, 137 and 138, Fleet, *C.I.I.* iii. 58-61.
2. (i) Bhamodra Mohota plate of Droṇasimha, dated (Gupta-Valabhi) year 183, *Ep. Ind.* xvi. 18-19.
(ii) Palitana plates of Dhruvasena I, dated (Gupta-Valabhi) year 206, *ibid.* xi. 105-8.
(iii) Two Palitana plates of Dhruvasena I, dated (Gupta-Valabhi) year 210, *ibid.*, pp. 110-14.

3. (i) Wala plate of Guhasena, dated (Gupta-Valabhi) year 246, *ibid.* xiii. 339-40.
- (ii) Palitana plates of Dharasena I, dated (Gupta-Valabhi) year 252, *ibid.* xi. 81-84.
- (iii) Palitana plates of Śimhāditya, dated (Gupta-Valabhi) year 255, *ibid.*, pp. 17-18.
- (iv) Palitana plates of Śilāditya I, dated (Gupta-Valabhi) year 286, *ibid.*, pp. 116-17.
- (v) Navalekhi plates of Śilāditya I, dated (Gupta-Valabhi) year 286, *ibid.*, pp. 178-80.
4. (i) Nogawa plates of Dhruvasena II, dated (Gupta-Valabhi) year 320, *ibid.* viii. 190-4.
5. (i) Bhavanagar plates of Śilāditya IV, dated (Gupta-Valabhi) year 372, *Ind. Ant.* v. 209-12.

Central India

6. (i) Poona copper plate of Prabhāvatī Guptā, *Ep. Ind.* xv. 41 ff.
7. (i) Majhgawan plates of Hastin, dated (Gupta) year 191, *Fleet, C.I.I.* iii. 107-8.
8. (i) Khoh copper plate of Hastin, dated (Gupta) year 163, *ibid.*, pp. 102-4.
- (ii) Karitalai copper plate of Jayanātha, dated (Gupta) year 174, *ibid.*, pp. 118-19.
- (iii) Khoh copper plate of Jayanātha, dated (Gupta) year 177, *ibid.*, pp. 122-3.
9. (i) Khoh copper plate of Sarvanātha, dated (Gupta) year 193, *ibid.*, pp. 126-8.
- (ii) Khoh copper plate of Sarvanātha, dated (Gupta) year 197, *ibid.*, pp. 133-4.
- (iii) Khoh copper plate of Saṅkshobha, dated (Gupta) year 209, *ibid.*, pp. 114-15.
- (iv) Khoh copper plate of Sarvanātha, dated (Gupta) year 214, *ibid.*, pp. 136-7.
10. (i) Arang plates of Bhīmasena II, dated (Gupta) year 282, *Ep. Ind.* ix. 344-5.

Rāshtrakūṭa inscriptions

11. (i) Tiwarkheda (Betul district) plates of Nannarāja, dated Śaka year 553, *Ep. Ind.* xi. 279-80.
12. (i) Samangada plates of Dantidurga, dated Śaka year 675, *Ind. Ant.* xi. 111-13.
- (ii) Paithan plates of Govinda III, dated Śaka year 716, *Ep. Ind.* iii. 105-6.

PLATE XV. *Eastern Malwa and Deccan*

1. (i) Eran inscription of Samudra Gupta, Fleet, *C.I.I.* iii. 20.
(ii) Udayagiri cave inscription of Chandra Gupta II, dated (Gupta) year 82, *ibid.*, p. 25.
2. (i) Bilsad (Eta district) pillar inscription of Kumāra Gupta I, dated (Gupta) year 96, *ibid.*, pp. 43-44.
3. (i) Mandasor inscription of Naravarman, dated Mālava (Vikrama) year 461, *Ep. Ind.* xii. 320-1.
(ii) Tumain inscription of Ghaṭotkacha Gupta, dated (Gupta) year 116, *ibid.* xxv. 117.
4. (i) Chakmak copper plate of Pravarasena II, Fleet, *C.I.I.* iii. 236-40.
(ii) Ajanta cave inscription no. 3, *A.S.W.I.* iv, pl. LVII.
(iii) Ghaṭotkacha cave inscription, *ibid.*, pl. LX.
5. (i) Siwani copper plate of Pravarasena II, Fleet, *C.I.I.* iii. 245-7. This is the main inscription from which the examples have been taken. But the following plates have also been consulted.

Plates showing angular features

- (ii) Ridhpur copper plates, *J.A.S.B.*, 1924, pp. 58 ff. The plates are published in reverse order.
- (iii) Belora copper plate, *Ep. Ind.* xxiv. 264-7.
- (iv) Indor copper plate, *ibid.*, pp. 54-56.
- (v) Dudia plates, *ibid.* iii. 260-2.
- (vi) Tirodi copper plate, *ibid.* xxii. 171-4.

Plates showing rounded features

- (vii) Basim copper plate, *Ep. Ind.* xxvi. 151-3.
- (viii) Kothuraka copper plate, *ibid.*, pp. 159-61.
- (ix) Pattana copper plate, *ibid.* xxiii. 85-88.
- (x) Balaghat copper plate, *ibid.* ix. 267.
6. (i) Arang copper plate of Jayarāja, Fleet, *C.I.I.* iii. 193-4.
(ii) Raipur copper plate of Sudevarāja, *ibid.*, pp. 197-9.
7. (i) Pipardula copper plate of Narendra, *I.H.Q.* 1943, pp. 145-6.
8. *Kadamba inscriptions*
 - (i) Devagiri plates of Mṛigeśvaravarman, year 3, *Ind. Ant.* vii. 35-36.
 - (ii) Talgunda pillar inscription of Śāntivarman, *Ep. Ind.* viii. 31-33.
 - (iii) Devagiri copper plates of Mṛigeśvaravarman, year 4, *Ind. Ant.* vii. 37-38.
 - (iv) Halsi copper plates of Mṛigeśvaravarman, year 8, *ibid.* vi. 24-25.

9. *Western Chālukya inscription*
 - (i) Yekkeri rock inscription of the time of Pulekeśin II, *Ep. Ind.* v. 7-8.
10. *Pallava inscriptions*
 - (i) Uruvupalli copper plate of the time of Simhavarman, *Ind. Ant.* v. 51-52.
 - (ii) Vilavati grant of Simhavarman, *Ep. Ind.* xxiv. 301-3.
11. *Inscriptions of the Madharas of Kalinga*
 - (i) Ragholi plates of Śaktivarman, *Ep. Ind.* xii. 2-3.
 - (ii) Bṛihatpostha grant of Umaravarman, *ibid.*, p. 5.
 - (iii) Komartali plates of Chandravarman, *ibid.* iv. 144.
 - (iv) Dhavalapeta plates of Umaravarman, *ibid.* xxvi. 134-5.
 - (v) Koroshanda plates of Viśhākhavarman, *ibid.* xxi. 24-25.
12. *Ganga inscriptions*
 - (i) Narasiṅhapalli plates of Hastivarman, dated (Gaṅga) year 79, *Ep. Ind.* xxiii. 65-66.
 - (ii) Urlam plates of Hastivarman, dated (Gaṅga) year 80, *ibid.* xvii. 332-3.
 - (iii) Achyutapuram plates of Indravarman, dated (Gaṅga) year 87, *ibid.* iii. 128-9.
 - (iv) Purle plates of Indravarman III, dated (Gaṅga) year 149, *ibid.* xiv. 361-3.
 - (v) Tekkali plates of Indravarman III, dated (Gaṅga) year 154, *ibid.* xviii. 309-10.
 - (vi) Chicacole plates of Devendravarman, dated (Gaṅga) year 183, *ibid.* iii. 131-3.

PLATE XVI. *Mysore, Mahārāshṭra, and Gujarat*

Kadamba inscriptions

1. (i) Maḷvalli stone inscriptions of Śivaskandavarman, *Ep. Carnatica*, vii. 252, no. 264.
2. (i) Halsi plates of Kākusthavarman, *Ind. Ant.* vi. 23.
 (ii) Halsi plates of Ravivarman, *ibid.*, pp. 25-26.
 (iii) Halsi plates of Ravivarman, *ibid.*, p. 28.
 (iv) Halsi plates of Ravivarman, *ibid.*, pp. 29-30.
3. (i) Bannahalli plates of Kṛishṇavarman II, year 7, *Ep. Ind.* vi. 18-19.

Western Chālukya inscriptions

4. (i) Badami cave inscription of Maṅgaleśa, dated Śaka year 500, *Ind. Ant.* iii. 305, and plate, *ibid.*, x. 58.
 (ii) Badami Kanarese rock inscription of Maṅgaleśa, *ibid.* x. 60.
 (iii) Badami inscription of Maṅgaleśa, *ibid.* xix. 16-18. This inscription is engraved bottom upwards.

5. (i) Aīnole inscription of Pulekeśin II, dated Śaka year 556, *Ep. Ind.* vi. 4-7.
 (ii) Nerur plates of Pulekeśin II, *Ind. Ant.* viii. 43.
 (iii) Copper plate of Pulekeśin II, dated Śaka year 535, *ibid.* vi. 73-74.
6. (i) Nerur plates of Vijayabhaṭṭārikā, *ibid.* vii. 163-4.
7. (i) Togarchedu plates of Vinayāditya Satyāśraya, dated Śaka year 611, *ibid.* vi. 86-87.
 (ii) Copper plate of Vinayāditya, dated Śaka year 614, *ibid.*, pp. 89-90.
 (iii) Vakkaleri plates of Kīrtivarman II, dated Śaka year 679, *Ep. Ind.* v. 202-5.
8. *Traikūṭakas of Gujarat*
 (i) Pardi plates of Dahrasena, *Ep. Ind.* x. 53-54.
 (ii) Surat plates of Vyāghrasena, dated (Kalachuri) year 241 (A.D. 490), *ibid.* xi. 220-1.

Gurjara inscriptions

9. (i) Sankheda grants of Dadda, dated (Kalachuri) year 346 (A.D. 595-6), *Ep. Ind.* ii. 20.
 (ii) Abhona plates of Śaṅkaragaṇa, dated (Kalachuri) year 347 (A.D. 596), *ibid.* ix. 297-8.
10. (i) Vadner plates of Buddharāja, dated (Kalachuri) year 360 (A.D. 608-9), *ibid.* xii. 33-35.
 (ii) Sarsaoni plates of Buddharāja, dated (Kalachuri) year 361 (A.D. 609), vi. 297-8.
 (iii) Sankheda grant of Dadda, dated (Kalachuri) year 391 (A.D. 640), *ibid.* ii. 21.

Kanarese inscriptions of the Rāshtrakūṭas

11. (i) Pattadakal inscription of the time of Dhruva, *Ind. Ant.* xi. 125.
12. (i) Hatti Mattur (Dharwar district) inscription of the time of Kṛishṇa I, *Ep. Ind.* vi. 161.
 (ii) Naregal inscription of the time of Dhruva, *ibid.*, p. 163.
 (iii) Lakshmeśvara inscription of the time of Śrī Vallabha, *ibid.*, p. 166.
 (iv) Inscription of Govinda III, dated Śaka year 726, *Ind. Ant.* xi. 126-7.

PLATE XVII. *Andhra and the neighbouring areas*

1. (i) Kondamudi (Kistna district) plates of Jayavarṇma, *Ep. Ind.* vi. 316-18.
2. (i) Narsapur (Kistna district) plates of Vijaya Devavarman, *ibid.* ix. 58-59.

- (ii) Kollair (Kistna district) plate of Nandivarman, *Ind. Ant.* v. 176-7.
- 3. (i) Kanteru plates (Guntur district) of Vijaya Skandavarman, *Ep. Ind.* xxv. 46-47.
- 4. (i) Īpur plates of Mādhavavarman I, *ibid.* xvii. 336-7.
- 5. (i) Ramatirtham plates of Indravarman, *ibid.* xii. 134-5.
(ii) Chikkulla plates of Vikramendravarman II, *ibid.* iv. 195-7.
- 6. (i) Siddhantam plates of Devendravarman, dated (Gaṅga) year 195, *ibid.* xiii. 213-15.
(ii) Alamanda plates of Anantavarman, dated (Gaṅga) year 304, *ibid.* iii. 18-20.

Eastern Chālukya inscriptions

- 7. (i) Timmapuram plates of Viṣṇuvardhana I, *Ep. Ind.* ix. 118-19.
- 8. (i) Pulibumra plates of Jayasimha I, *ibid.* xix. 256-7.
(ii) Peddavegi plates of Jayasimha I, *ibid.*, pp. 259-60.
(iii) Nidupuram plates of Jayasimha I, *ibid.* xviii. 56-57.
- 9. (i) Kondanagaru plates of Indravarman, *ibid.*, pp. 2-4.
(ii) Chendalur plates of Sarvalokāśraya, *ibid.* viii. 238-40.
- 10. (i) Īpur plates of Viṣṇuvardhana III, *ibid.* xviii. 59-60.
(ii) Eduru plates of Vijayāditya, *ibid.* v. 120-1.

The inscriptions of the Ānandas

- 11. (i) Gorantla plates of Attivarman, *Ind. Ant.* ix. 102-3.
- 12. (i) Mattepad plate of Dāmodaravarman, *Ep. Ind.* xvii. 329-30.

PLATE XVIII. *South India*

- 1. (i) Siroda (Goa) plates of Devarāja, year 12, *Ep. Ind.* xxiv. 145.
- 2. (i) Mayidavolu plates of Śivaskandavarman, *ibid.* vi. 86-88.
- 3. (i) Hirahadagalli plates of Śivaskandavarman, *ibid.* i. 5-7.
- 4. (i) Guṇapadheya or British Museum plates of Chāru Devī, *ibid.* viii. 145-6.
- 5. (i) Darsi plate of the grandson of Virakūrchavarman, *ibid.* i. 398.
- 6. (i) Magdur grant of Simhavarman, year 8, *Ind. Ant.* v. 155-6.
(ii) Pikira plates of Simhavarman, *Ep. Ind.* viii. 161-2.
- 7. (i) Omgodu grant of Simhavarman, *ibid.* xv. 254-5.
(ii) Chura grant of Vijaya Viṣṇugopavarman, *ibid.* xxiv. 141-3.

8. (i) Udayandiram plate of Nandivarman, *Ind. Ant.* viii. 168-9.
9. (i) Pallava inscription at Panamalai. G. Jouveau-Dubreuil, *Pallava Antiquities*, i, London, 1916, plate I opposite p. 20.
10. (i) Anaimalai inscription of the time of the Pāṇḍya king Parāntaka, Kali year 3871 (A.D. 770), *Ep. Ind.* viii. 319-20.
11. (i) Trichinopoly cave inscriptions, *South Indian Inscriptions*, vol. i, no. 34, p. 30, and pl. X in vol. ii.
12. (i) Dharmarājaratha inscriptions at Mamallapuram, *ibid.* i. 2-4, and pl. X, *ibid.* ii, nos. 1-17.

CEYLON

Scope

THE first systematic study of the *Ancient Inscriptions in Ceylon* began with the publication of a book bearing this title by Dr. Edward Müller in 1883. The later discovery of a large number of further inscriptions led to the issuing of a regular journal, called *Epigraphia Zeylanica*, in imitation of the *Epigraphia Indica*. Every inscription edited in this journal has a paragraph devoted to its script, but generally greater stress is laid on the historical contents of the inscriptions, and on the basis of the available historical clues an attempt is made to identify any ruler mentioned in them, and to fit him into the chronology built up by a study of the traditional history of Ceylon. Sometimes palaeography is used to fix the date of the ruler, but more often the date of an epigraph is determined by the identification of the ruler and his place in the traditional chronology. Wherever an epigraph is dated on its own merits, it is done on the basis of its relation to the writing styles of South India, e.g. the earliest inscriptions of Ceylon have been compared with Aśoka's Brāhmī, and it is assumed that they are roughly of the same date, if not earlier, as is suggested by Dr. Vimalananda. This assumption is more probably based on the tacit belief in the traditional story of Aśoka's mission to Ceylon than on the actual analysis of the writing. On the basis of such dates given to the epigraphs Dr. S. Paranavitana drew up a chart, entitled 'Evolution of the Sinhalese script between the fourth and ninth centuries'.¹ The same material was used by Dr. T. Vimalananda for his thesis.² In this thesis four broad chronological divisions are made, under which the changes in the letter-forms are described. The divisions are: (i) 247-3 B.C., (ii) 3 B.C.-A.D. 490, (iii) A.D. 490-703, and (iv) A.D. 703-1073.

¹ *Ep. Zeylanica*, iv, pl. 15, facing p. 150.

² University of London, 1951, thesis entitled 'Epigraphy and Palaeography of Ceylon down to Tenth Century A.D.'

From these two palaeographical studies we no doubt learn about the changes that a particular letter assumed in different epigraphs, but we hardly get at the underlying principles that caused these changes. The charts may create an impression that all the new forms were locally evolved. But this is not true. Besides the local factors, extraneous influences were largely responsible for introducing new forms into the island. All of them have to be reduced to particular schools and then related to local or foreign styles. The local style is apt to preserve older forms at an unexpectedly late date, but the foreign elements and their influences help in determining the chronology. On the basis of these two working hypotheses a study of the Ceylonese inscriptions down to the eighth century A.D. is here made, and the writing is analysed purely on a technical basis. No help is drawn from the traditional history in fixing the date of the inscriptions.

Nature of writing

There is nothing in the early Ceylonese script which would suggest an origin independent of Indian writing. The Ceylonese phonology as well as the forms of the letters are inseparably connected with those of India, but once a particular script was introduced into Ceylon its later development followed a pattern not necessarily in line with those that obtained in India. In this evolutionary aspect conservatism is a striking feature of Ceylonese writing. While the Indian styles changed from time to time with new technical advances, the older forms tended to survive in Ceylon, probably because of the absence of appreciable change in the technique of writing. This particular feature is termed hereafter the 'conservative writing' of Ceylon. It is this writing which evolved into the later Sinhalese script. But the evolution clearly shows extraneous influences from peninsular India, traceable mainly to five different sources: (i) the Śātavāhana and Western Kshatrapa records, (ii) the cave inscriptions of the extreme south, (iii) the Ikshvāku epigraphs of the eastern coast, (iv) the inscriptions of the Kadambas and other rulers of the western coast, and (v) the Pallava Grantha writing. In Pl. XIX I have given a selected specimen of the scripts showing the conservative writing and the foreign styles that reached Ceylon, but it was not possible to show in detail the influence of each of the latter on the evolution of the local style. I have attempted here to separate the conservative

writing from the foreign scripts which from time to time penetrated Ceylon, and to build up a chronology of the alphabetic system in the light of the intruding elements. This chronology may or may not agree with the traditional history of Ceylon, but as my purpose is to study the palaeography of Ceylon, and not to establish the chronology of the Ceylonese kings, I can leave the latter question to the historians.

There are a limited number of inscriptions from Ceylon, which are written from right to left. The only inscription published so far comes from Duwe Gala cave no. 7.¹ D. C. Sircar comments on this inscription:

This peculiar characteristic of the record which appears to belong to about the first century B.C. suggests that either the Brāhmī script was introduced in Ceylon before Aśoka (c. 273–232 B.C.) who writes it from left to right or less probably that it was influenced by an earlier script of the South. Excepting some portions of the barbarously engraved Yēṛraguḍi MRE, Aśoka's Brāhmī records are not to be read from right to left. The present epigraph possibly proves that, like Kharoshthī, Brāhmī too was originally written from right to left.²

This remark of Dr. Sircar is hardly justified, as there is no evidence of a pre-Aśokan Brāhmī in Ceylon, nor of 'an earlier script of the South'. These inscriptions cannot be taken as survivals of an earlier practice in the absence of any definite early specimen. The present inscription shows a crude version of the writing that prevailed in Ceylon in the first to second century A.D. Here some of the letters, such as the second *da*, *śa*, *ta*, are reversed, while the others, such as the first *da*, *le* and *ṇā* are written in the right way. The letter *da* recalls the forms seen in Pl. XIX. 4 and 5, while *la* has its upper end curved to the left. This reverse order of the letters is best taken as a mistake on the part of the engraver.

A. Pl. XIX. 1 and 2. The earliest examples of Ceylonese writing come from the caves of Vessagiri, Ritigala, Keramba Hina and Naulpata. These cave inscriptions are related to one another not only by their contents but also by the particular kind of the rock surface on which they are inscribed. Morphologically they are reducible into two groups. Inscriptions included under no. 1³ have long verticals as in the earliest inscriptions from India, out

¹ *Ceylon Antiquary and Literary Register*, iii. 104, pl. xx.

² *Select Inscriptions*, p. 233, n. i.

³ See Bibliography at the end of the chapter, p. 225.

cave inscription no. 12 from Vessagiri, which falls under no. 2, has its verticals equalized—a practice which started in North India after the Mathura Kshatrapa inscriptions in the first century A.D.¹ But this practice did not reach Ceylon directly from the north, as is clear from the letters which are akin to southern characters. Hence no. 2 can hardly be dated earlier than the beginning of the second century A.D. Here we find only three medial vowels, *i*, *u* and *e*. Of these the medial *u*, when added to *pu* and *su*, is a downward extension of the right vertical—a later practice. The letter *ka* has its vertical longer than its cross bar. *Ta* has a hook attached to the right of a vertical in the Deccani style. The angularity is well marked in the forms of *pa*, *sa* and *ha*. *Va* has a triangular base. The letter *ma* copies the form of the southern caves. The conjunct *sra* has its *ra* appended at the right bottom of *sa*. There is a certain unity in the inscriptions included under no. 1, though here also different traditions are traceable. Of the initial vowels the most distinctive is *a*, where the two left curves meet the right vertical separately—a practice which became common in the post-Aśokan period.² The initial *u* generally has its vertical longer than the horizontal. The medial *i*, as in *ki*, *chi*, *di* and *ri*, starts from the middle of the vertical; the medial *u* is applied to the left, middle, or right of the base line, and the medial *o* in *so* is a horizontal line drawn across the angular peak of *sa*. These features again point to a late date. In the letter forms two traditions are marked—one with rounded features, and the other with angular forms, especially in Ritigala cave inscriptions nos. 2–7. The angular features can be seen in the forms of *a*, *da*, *pa*, the triangular base of *ma*, *la*, *sa* and *ha*. Occasionally the vertical of *ka* is equal in length to its cross-bar. *Ga* has an angular peak. *Gha* in Ritigala nos. 8–10 has its left vertical slightly longer than the remaining two. *Tha* has a flat base. Both *ṇa* and *na* have short bases. *Ta* is of the Deccani type with an inclined stroke to the right of a vertical. The mouth of *da* is open to the left. *Ba* is a square. *Bha* in Ritigala cave inscriptions nos. 8–10 follows the older form, but its upper stem is added by mistake to the left instead of to the right. *Ma* has varying forms—the first is of the southern cave type with a horizontal line within bent arms, which has been called the Dravidian *ma*;³ the second is of the Nanaghat or Girnar style with two upper diagonals projecting

¹ See above, pp. 51–53.

² See Chapter 5, pp. 50–74.

³ See above, p. 73.

from a circular base;¹ the third variety has its upper strokes curved; and the fourth variety, which occurs only once, has the upper curving strokes separated from the circular base by a line. *Ya* has a crescentic base with the middle vertical extended. *Ra* is either a straight or serpentine vertical line. *Va* usually has a rounded base. *Śa* has an angular peak, but its right limb is shorter than its left, and the mid-stroke is attached to the left limb. The writing in these inscriptions is clearly related to that of the Nanaghat records in Western India and that seen in the caves of the extreme south, though local tendencies in the application of the medial *i* and *o* and the peculiar forms of *śa*, *bha* and *ra* are obvious. In any case there is no reason to date these inscriptions earlier than their Indian counterparts, and according to the chronology of the Indian inscriptions already discussed² these inscriptions may also be dated about the beginning of the first century A.D.

B. Pl. XIX. 3 is taken from the two Vevala-tanna inscriptions, and Pl. XIX. 4 is derived from Maha Ratmale, Naulpata, and Ves-sagiri rock inscriptions. These two groups of inscriptions make a fundamental departure from the earlier writing. Over and above the fact that these are rock engravings, except one at Vevala-tanna, there is a marked improvement in the manner of engraving the letters compared with the cave writing of the earlier group. The forms are no longer crude, but speak of an experienced hand. There is no mistake in the actual drawing of the letters. But these forms do not evolve from the earlier cave writing. They belong to altogether different traditions, almost identical with the writing of the later Śātavāhanas and the early Western Kshatrapas (Pl. IX. 1, 2, 3). The Vevala-tanna inscriptions come closest to the writing seen in the records of Gautamīputra Śātakarṇi. The date 215 read in one of these inscriptions and calculated according to the Ceylonese Buddha era to be 93 B.C.³ does not appear to be correct. I do not think that the signs represent numeral figures at all. They clearly read *makasa*. In the two inscriptions from Vevala-tanna there is a stylistic difference. The cave writing here has equalized verticals, while the rock engraving still maintains unequal verticals. The letter-forms have rounded features, but the lower ends of the verticals are not curved. The medial vowels are now given regularly,

¹ See above, p. 66.

² See above, p. 73.

³ By Dr. Wickremasinghe in *Ep. Zeylanica*.

as seen in the Śātavāhana records. *A* still has its two left curves meeting the right vertical separately. Both *ga* and *śa* have rounded tops. *Ta* is of the Deccani type. *Da* has its mouth open to the left. *Ra* is serpentine. *Ma* copies only the Śātavāhana form.

Inscriptions included under category no. 4 may be compared with the writing seen in the records of the Śātavāhana ruler Vāśiṣṭhīputra Puṣumāvi (Pl. IX. 3). Here the lower ends of the verticals in *a*, *ka*, *ra*, and the vertical type of the medial *u* are curved to the left. The initial *a* now copies two Śātavāhana forms—the first has its two left curves meeting the right vertical at the same point, and the second has its upper left curve broadened and the lower one appended from the left side of the former curve. The medial *i* is a tall curve either going to the left or bending to the right, as seen in the Mathura Kshatrapa inscriptions.¹ Identical Śātavāhana forms can also be seen in the consonantal types used in these inscriptions. The notable examples are *cha* with a beaked loop below a stem; both *ḍa* and *da* with rounded backs and their mouths open to the right; *ta* with a broad curve added to the right of a vertical; *dha* with its left arc rounded or pointed; the slightly bent left sides of *pa*, *ba* and *ha*; *bha* of the broad type; *ma* with a triangular looped base; *ya* round- or flat-based; the right vertical of *la* inclined to the right; and *va* as a triangle without an upper stem. Henceforward *śa* and *sha* are not used in the Ceylonese inscriptions, except in the Sanskrit records of much later date. Another local peculiarity is the reduction of the horizontal lines in *ṇa* and *na*—a practice which henceforward becomes typical of Ceylon. On the evidence of this analysis these inscriptions may be placed in the later half of the second century A.D.

C. Pl. XIX. 5 is taken from the Palu Makichava rock, Thuparama slab, and Viharegala rock inscriptions of Gāmini Abhaya, and from another Viharegala rock inscription of Saba. The writing in these inscriptions is of the Śātavāhana type, dealt with in B above, but the fundamental difference is that here for the first time we see line head-marks over the verticals, possibly an influence from the Western Kshatrapa style. Some new forms are also introduced from the late Śātavāhana records: the initial *u* has its vertical shortened; the initial *o* has its angles rounded; *cha* optionally loses its upper stem; *ta* is of the looped type; *la* has a tall straight

¹ See above, p. 64.

vertical on the right; and *va* has a circular loop below a stem. In spite of these new influences the writing is somewhat retrogressive. The older forms persist in *a*, *ka*, *ṇa*, *na*, *ba*, *ya* and *ra*. These inscriptions may be placed in the first half of the third century A.D.

D. Pl. XIX. 6 is taken from Perumaiyan-kulam rock and Vallipuram gold plate inscriptions of Vasabha and from the Jetavanarama inscription of Maḷutissa. Of these the gold plate inscription has an individual character of its own. In this particular case the lower curves of the verticals are over-emphasized, and the medial *i* has a sharp curve to the left. The other two inscriptions are remarkable for their graphic writing, well-drawn forms, and symmetrical arrangement of the letters, such as is found only in the Ikshvāku records in the south-east coast of India.¹ In the same fashion the letters are characterized by triangular head-marks. The medial *i* is a tall curve to the left, and the verticals in *a*, *ka* and *ra* and the vertical type of the medial *u* are emphasized. But the local forms are preferred in *cha*, *ṇa*, *ta* and *na*. The Ikshvāku forms are marked in *a*, *i*, *u*, *ka* (optionally), *ga*, *ma*, *ya*, *ra*, *la* and *va*. From the same source is copied the letter *ḷa*, which appears for the first time in Ceylon. The editor of the Perumaiyan-kulam inscription places it towards the close of the first century A.D. and says that it is earlier than the Maha Ratmale inscription discussed above in group B. But this is hardly likely. The evolution from the Śātavāhana to the Ikshvāku writing is quite clear in the south-east coast of India. In these Ceylonese inscriptions we have definite evidence of the school of Amaravati and Nagarajunikonda writing reaching Ceylon, probably in the latter half of the third century A.D.

E. Pl. XIX. 7 is taken from Tonigala, Timbirivara, and Vesagiriya rock inscriptions. The writing is conservative, but is largely influenced by the Ikshvāku style. Though the graphic character of the Ikshvāku writing is not seen here, some of its features continue. The line head-marks over the verticals are clearly seen. The new type of the Ikshvāku *a* is seen side by side with the older local form having two left curves joining the right vertical separately. The initial *i* with three lines is of the Ikshvāku type, but generally the third right line is wanting. *U* has its base curved upwards. *E* is almost a circle. The medial *i* retains both

¹ See above, p. 98.

the varieties of the previous period. The medial *o* is merely a line above the letters, as in *ko*. The cross-bar of *ka* is very short. *Ga* is round topped with a line foot-mark at the left limb. *Cha* is of the beaked type with no upper stem. *Ja* optionally has its vertical curved. Both *na* and *na* are of the local type, but *ta* optionally is of the looped variety. *Ya* has a flat base with its middle vertical slightly lengthened. *Ra* is generally a straight vertical. *Lo* has its medial *o* applied in the South Indian cursive manner. *La* copies the Ikshvāku form. The vowelless *m* in *ddham* is placed in line with the other letters. Hardly any new influence is found in these letter-forms except the medial *o* in *lo*, which does not appear in India before the fourth century A.D. These inscriptions may be placed in the same century.

F. Pl. XIX. 8 is taken from the Ruvanvālisāya pillar inscription of Buddhādāsa; Pl. XIX. 9 is derived from the fragmentary Jetavanarama inscription; and Pl. XIX. 10 is from the Kiri Vehera slab and Anuradhapura slab inscriptions. Of these nos. 8 and 9 introduce a new style of writing from India. But no. 10 resuscitates the conservative writing as influenced by this new style. Dr. B. Ch. Chhabra¹ compares no. 8 with the Cho Dinh rock inscription (Pl. XX. 4) from Indo-China, but the firm straight lines of the Cho Dinh inscription represent a fundamental difference from the notched horizontals of the Ruvanvālisāya inscription. As will be shown later,² the Cho Dinh inscription comes closer to the square-headed writing from Malwa, but the present inscription no. 8 clearly shows the influence of stylus writing. Here the head-marks are also notched. The forms are akin to those appearing in the Kadamba inscriptions of the fourth to fifth century A.D., though here in Ceylon the medial vowels retain the local forms. Notches can be seen in the cross-bar of *ka* and the horizontals of *ṭa*, *ḍha*, *ṇa*, *pa*, *ma*, *ya*, *la* and *ha*. The left sides of *pa*, *ba* and *ha* are bent. *Ya* has its third left arm shorter than the others, and it is slightly curved inwards. *Na* copies the Kadamba form with its base curved and the upper horizontal split into two strokes ending in curls. *Ta* is of the looped variety. *La* has its right vertical curved inwards, and *va* has a circle below a stem. In no. 9 we see the fully developed square-headed type of writing introduced into Ceylon from the country of the Kadambas. We get here the roof type of *i*, the

¹ *J.A.S.B.*, 1935, p. 10.

² See below, p. 233.

foot type of *cha*, and the looped varieties of *ṇa*, *na* and *ta*. Notches are also seen in this inscription as in no. 8. Both these inscriptions may be placed in the fifth century A.D. In no. 10 head-marks are faintly traceable but the letter-forms are much simplified. Notches are seen only in *cha*, *ma* and *va* (optionally). The curves at the lower verticals are also gone. *Cha* is of the foot type and *ta* of the looped variety. The local developments can be seen in *a*, which extends its lower hook almost to touch the right vertical, *ka* having a short curved bar, *ṇa* and *na* both having short horizontals, and *ya*, which has either three straight verticals on a base or a curl at the left vertical. Other letters are of the same type as seen in nos. 8 and 9. These inscriptions may be placed in the latter half of the fifth century A.D.

G. Pl. XIX. 11 is taken from Nagarikanda, Nilagama, Vessagiriya, and Burrow's Pavilion inscriptions; Pl. XIX. 12 is derived from Dakkhina Thupa rock inscription of Dathopatissa. These inscriptions introduce a style which is in conformity with the conservative writing. The new developments are clearly marked in no. 11, while no. 12 is a further simplification of this style. These letter-forms could well be evolved locally, but as they are found in a limited number of inscriptions, issued within a limited period, it is likely that they were borrowed from outside. But this style of writing is not known in India, except in one inscription, the Siroda plates of Devarāja (Pl. XVIII. 1), which has been dated in the sixth century A.D.¹ As no details are known regarding the palaeographical developments in Goa, it is difficult to be certain about the question of borrowing. If this style was not local to Goa, it may be taken as a counter-influence from Ceylon on the western coast of the mainland. The initial *a* is completely changed in no. 11, though in no. 12 it retains the old form. In no. 11 the lower left curve is stretched up to the right vertical and the middle horizontal is optionally dropped. In the final form we find only the upper curve slightly broadened on the left and there is no trace of the lower curve. The initial *i* is of the double-roofed variety in no. 11, as in the inscriptions from Gujarat (Pl. XVI. 8-10). *E* in no. 11 is a further simplification of the foot type with its mouth open upwards, but in South India the foot is placed to the left and here it is to the right. The form of *o*, which is wrongly read as *u*, is a type well-known

¹ See above, p. 196.

in the south. The medial vowels are usually local, except the circle type of *i*, which is copied from the mainland. Of the consonants the most remarkable are the following: the round-topped form of *ga* with left limb optionally curved inwards; *cha* in a new form, besides the foot type, a triangle with its right arm extended upwards; *cha*, *dha*, *pa* and *ha* with notches in the lower sides of the foot type; *ṇa*, of the local type with insignificant horizontals; *ta*, optionally of the looped variety; *na* with a closed loop at the left; a new type of *ma* with its mouth closed by a line, as occurs also in the Siroda plates; *ya* either of a simple tripartite form, as in the Siroda plates, or bipartite with an optional loop at the left; *la* with lower curve broadened; and *sa*, optionally the simplified version of a form which has an open-mouthed triangle at the left corner. On the basis of these characteristics no. 11 may be placed in the sixth century A.D., and no. 12 in the seventh century.

H. Pl. XIX. 13 is taken from the Kondakadu rock inscription of Upatissa. The writing is a further development from the style described in group G above. Here the letter forms are identical with those seen in no. 11, but there is a stylistic difference. The writer in this inscription prefers to add small circles at the beginning or end of the lines. This tendency is known only from the Bannahalli plates of the Kadamba ruler Kṛṣṇavarman II (Pl. XVI. 3), which has already been dated¹ in the mid sixth century A.D. This particular tendency gives further support to the suggestion that the style of writing seen in no. 11 is borrowed from this region of peninsular India. The present inscription may be placed in the early seventh century A.D.

I. Pl. XIX. 14 is taken mainly from the Tiriraya rock inscription. The writing seen here copies the Pallava Grantha style of the seventh to eighth century A.D. (Pl. XVIII. 9-11). The Kuchchaveli rock inscription gives the simplified version of this style. The only initial vowel known is *i*, which is of the double-roofed type with a line joining the right roof and the dot below. Double-ruled lines are seen in the verticals of *ka*, *ra*, and the vertical type of the medial *u*, and also the subscript *ya*. *Kha* is seen for the first time in Ceylon. It has a broad looped base, and sometimes the mouth of this loop opens upwards. The left limbs of *ga* and *śa* curve outwards. *Gha* is of the simple type with three uprights on a

¹ See above, p. 183.

base. *Ja* shows the simplified version of the Grantha form, in which the loop in the lower arm is lost; but the Sinhalese inscription no. 13 has the true Grantha form. *Na* is of the open-mouthed variety with loops at the lower ends. *Ta* is of the looped variety. *Tha* has an open mouth of the circle type. *Dha* is roughly oblong. *Bha* opens out its triangular mouth, and the medial *u* and *ū* added to it are of the broad Pallava type. The medial *i* is also of the circle type. *La* extends its upper curve downwards. *Sha* optionally has the Grantha form, with a double loop at the right limb, and the triangle at the left of *sa* opens upwards. These features clearly relate this writing to the Grantha style of the Pallava inscriptions. The inscriptions may be placed in the eighth century A.D.

Conclusion

The origin of Ceylonese writing is traceable to the style of writing in India which was made popular by the activities of the Buddhists. The earliest inscriptions bear close affinity to the writing seen in the Nanaghat records and the cave inscriptions of the extreme south. In the next stage influence from the later Śātavāhana records is clearly traceable. In the third century A.D. the graphic style of the Ikshvāku records reached Ceylon. But side by side with these extraneous influences Ceylon maintained its conservative style of writing, in which survived the oldest forms seen in the island. The next influences reached Ceylon from the country of the Kadambas and the western coast. Finally, in the seventh to eighth century A.D., the Pallava Grantha writing penetrated into the island. Influences from these various styles were left behind in Ceylon, where a local conservative writing was gradually developing to meet the demand of the local language and phonetics.

BIBLIOGRAPHY

PLATE XIX

- I. (i) Vessagiri cave inscriptions, except no. 12, *Ep. Zeylanica*, i. 18-21, pls. 5, 6.
- (ii) Ritigala cave inscriptions, *ibid.*, pp. 144-6 and pl. 18.
- (iii) Keramba Hina cave inscription, *ibid.*, p. 146 and pl. 19, top left.
- (iv) Naulpata alias Na-Arambadda-Hina cave inscription, *ibid.*, p. 147 and pl. 19, top right.

2. (i) Vessagiri cave inscription, rock B. cave no. 12, pl. 6, *Ep. Zeylanica*, i. 20.
3. (i) Vevala-tanna rock inscription, *ibid.*, p. 152 and pl. 19.
(ii) Vevala-tanna cave inscription, *ibid.*, p. 150 and pl. 19.
4. (i) Vessagiri rock inscription, *ibid.*, p. 21 and pl. 7.
(ii) Naulpata rock inscription, *ibid.*, p. 148, no. c and pl. 19.
(iii) Maha-Ratmale rock inscription, *ibid.*, pp. 61-62, pl. 13 (a).
5. (i) Palu Makichava rock inscription of Gamini Abhaya, son of Maharaja Tisa and grandson of Vahaba, *ibid.*, p. 211 and pl. 27.
(ii) Thuparam slab inscription of Gamini Abhaya, *ibid.* iii. 116 and pl. 7.
(iii) Two rock inscriptions at Viharegala, *ibid.*, pp. 165-6 and pl. 13.
6. (i) Perumaiyan-kulam rock inscription, *ibid.* i. 69 and pl. 13 (b).
(ii) Jetavanarama inscription of Maharaja (Ma)lu Tisa, *ibid.*, pp. 255-6 and pl. 30.
(iii) Vallipuram gold plate of Vasabha, *ibid.* iv. 237 and pl. 23.
7. (i) Tonigala rock inscription of Siri Meghavarnna, son of Mahāsena, *ibid.* iii. 177-8 and pl. 14.
(ii) Timbirivava rock inscription of Meghavana, son of Sirinaga, *ibid.* iv. 217 and pl. 22.
(iii) Vessagiriya rock inscription of Sirinaga, son of Tisa, *ibid.*, pp. 221-2 and pl. 22.
8. (i) Ruvanvalisaya pillar inscription of the reign of Buddhadasa, *ibid.* iii. 122 and pl. 8; *J.A.S.B.*, 1935, pl. 1, fig. 2.
9. (i) A fragmentary inscription from Jetavanarama, *Ep. Zeylanica*, iv. 281-2 and pl. 27.
10. (i) Kiri Vehera slab inscription no. 2, *ibid.* iii. 218 and pl. 23.
(ii) Anuradhapura slab inscription of Khuda-Parimda, *ibid.* iv. 114 and pl. 11.
11. (i) Nagarikanda rock inscription of Kumāradāsa, *ibid.*, p. 123 and pl. 11.
(ii) Nilagama rock inscription of Daḷa Mugalan, *ibid.*, pp. 294-5 and pl. 28.
(iii) Four rock inscriptions from Vessagiriya in Anuradhapura, *ibid.*, pp. 132-3.
(iv) Inscriptions on the steps near Burrow's Pavilion at Anuradhapura, *ibid.*, pp. 139-40, pl. 13.
12. (i) Dakkhina Thupa (Anuradhapura) rock inscription of Dathopatissa, *ibid.* v. 69 and pl. 3.
13. (i) Kondakadu rock inscription of Upatissa, *ibid.*, p. 79, pl. 3.
(ii) Seven Sinhalese inscriptions of the seventh and eighth centuries, only no. 1, *ibid.* iv. 143-9, pl. 14, no. 1.
14. (i) Tiriray rock inscription, *ibid.*, pp. 158-9, pl. 16.
(ii) Kuchchaveli rock inscription, *ibid.* iii. 161, pl. 12.
(iii) A Sinhalese inscription, *ibid.* pl. 14, no. IV.
(iv) Mihintala Sanskrit inscription, *ibid.*, pl. 24.

SOUTH-EAST ASIA

Scope

As early as 1877 K. F. Holle produced his *Tabel van Oud- en Nieuw-Indische Alfabetten* illustrating the different forms of writing, past and present, known from South-east Asia. His object was mainly to acquaint his readers with the scripts, but he had realized the significance of studying the writings of this vast area in relation to Indian palaeography. For this purpose he used not only Prinsep's tables¹ but also A. C. Burnell's *Elements of South Indian Palaeography*. However, not much advance could be made at this time because of the paucity of accurate reproductions of the inscriptions. Naturally the letter-forms given by him appear to be much affected by retouching. This point was brought out by H. Kern² in his review of the book. The real advance in the comparative study of these scripts was made with the publication of Bühler's *Indische Palaeographie*. Barth, Bergaigne, and Coedès discussed the problem in their editions of the inscriptions from Indo-China and Siam, Vogel contributed on the early Sanskrit inscriptions from Java and Borneo, and Blagden commented on the inscriptions from Burma. The late E. H. Johnston edited some Sanskrit inscriptions from Arakan. Early inscriptions from Malaya are published in the *Malayan Journal of the Royal Asiatic Society*,³ and those of Sumatra are in volume xxx of *B.E.F.E.O.* Some inscriptions have been re-examined by Dr. B. Ch. Chhabra in his thesis, 'Expansion of the Indo-Aryan Culture'.⁴ All these materials are utilized here, and in this chapter an attempt is made to trace the origin and development of the different scripts of South-east Asia to the end of the seventh century A.D., stopping at a point when the proto-regional scripts had almost taken the field in the different areas. Accordingly I shall include all the early Sanskrit records as well as the earliest Cham, Mon, and Pyu inscriptions.

¹ See above, p. 2.

² *Eene Bijdrage Tot de Palaeographie van Nederlandsch Indie*.

³ Vol. xviii. 1940.

⁴ *J.A.S.B.*, 1935, pp. 1-64.

letters, reading *deva*. Both letters have line head-marks. *Da* shows the double-curved form, but the lower curve is rather squat. *Va* is triangular. The medial *e* is a top slant. These features were known only in North India and are also to be seen in the later inscriptions of the Western Kshatrapas of Gujarat and Malwa. In terms of the palaeography of this latter region a date in the third to fourth century A.D. will not be far amiss. But on the basis of only two letters it is wrong to be dogmatic. (B) This group of inscriptions is characterized by notched head-marks. Only two medial vowels are used: the long *ā* has a downward tick attached to the end of its horizontal stroke, and the *anusvāra* is marked by a line. The characteristic letters are the broad type of *bha* with a notch in its horizontal bar, *ta* with its two lower arms rounded at the upper end, the round-backed *da*, the triangular *va*, the tripartite *ya* with a loop at the left vertical, and *sha* with a bend at its left side. These features leave hardly any doubt that they belong to a region where the South Indian forms were used along with North Indian letters. This again points to Gujarat. They may be dated in the fifth century A.D. (C) This group has the largest number of seals. The letters are characterized by solid square head-marks. The medial vowels are all northern—the medial *ā* and *o* being top slants, except in *tā* where the medial *ā* is a horizontal stroke. The medial *i* is a left curve, as the medial *ī* has an additional initial prominence. The letter-forms tend to angularity, and they are easily comparable with the first group of the Vākāṭaka inscriptions (Pl. XV. 4). The forms are almost identical except in the case of *a*, which suggests a later date, and *ta* which points to the northern region of the Vākāṭaka dominions. They may be assigned to the fifth century A.D.¹ (D) To the last group belongs a seal reading *Vishnumitrasya*. Another seal reading *Śrīmagaya* has been doubtfully assigned to this group. These letters have solid triangular head-marks, characteristic of the northern scripts from the fourth century A.D. onwards. The forms are rather ornamental, with notches in the lower sides of *va*, *ma* and *sha*. The subscript *ra* is of the southern rounded form. *Ta* is northern, while *ma* has a looped base. The medial *i* is an upward stroke ending in a curl, as

¹ Professor V. V. Mirashi has published similar seal-stamps from the Central Provinces (now Madhya Pradesh) in *J.N.S.I.*, vol. iii, pt. ii, pp. 100-2, two of which read *apramāda* and *jītaṃ bhagavatā* respectively. They are exactly in the same character, and Professor Mirashi attributes them to the fourth century A.D.

seen in the Western Indian inscriptions of the fourth to fifth century A.D. The nearest comparable material comes from Malwa (Pl. IX. 7). They may be dated in the fifth century A.D. The Malayan seal belongs to this group. Thus all these seals point to the region of Gujarat and Malwa between the fourth and fifth centuries A.D. It is natural therefore to suppose that the first contact was established with Western Indian seaports. As the detailed analysis given below will show, it is from this region that the earliest writing style of South-east Asia was derived. It is found again in Indo-China. Two types of writing are known—one represented by the Vo-Canh inscription, and the other, the square-headed type, seen in the inscriptions of Bhadravarman. These styles are quite in keeping with the two styles in use in Malwa between the fourth and fifth centuries A.D. A crude local copy of the first type of writing is also seen on a stone inscribed with the Buddhist creed from site no. 1 at Kedah in Malaya, but that inscription must be dated to the end of the fifth century A.D., as it shows the later form of *tha*, and the open-mouthed type of *ṇa*.

(ii) From the close of the fifth or the beginning of the sixth century A.D. onwards writing spread to most of the regions of South-east Asia. The style which became current at this time bears the closest resemblance to the writings known from the records of the Madharas, Vishṇukunḍins, and Pallavas. The earliest examples known are from the *yūpa* inscriptions of Mūlavarman from Borneo, which, though showing ornamental developments and new types of medial vowels, are related to the style of writing known from the Bhadravarman's inscriptions in Indo-China. This relation is established by the simplicity of the long verticals, which generally do not have curved ends. On the other hand, the new developments link the script with the ornamental style of writing seen in almost all the inscriptions of the sixth century A.D. The best-known examples in this style are the inscriptions of Pūrṇavarman from Java, the records of the kings from Fou-nan, the Srideb inscription from Siam, and the inscription of the *Mahānāvika* Buddhagupta from Malaya. These inscriptions borrow not only the Pallava medial vowels but also some of the forms of their letters. It seems that contact with the south-eastern coast of India was greatest at this time. But it is wrong to think that the western coast was totally forgotten. The influence from that coast is traceable in a few letters of this time, and much more so in those of the seventh

century A.D. In fact the dated inscriptions of this last century from Fou-nan and Sumatra exemplify a happy mixture of the sixth-century writing of the eastern coast of India and the new features of the seventh century from the western coast. It is strange to note that the Pallava Grantha writing of the seventh century is not traceable in these inscriptions at all. On the other hand, we find a local development towards simplification, first recognizable in the forms of *ka*, *ra* and *la*, which later characterized the growth of the local scripts in South-east Asia. These dated inscriptions are very helpful in relating the undated sixth-century inscriptions with them, and thus indirectly they confirm my dating of the Pallava inscriptions on the basis of the Indian evidence.¹

(iii) Burma appears to have been in contact by the overland route with Eastern India and by the sea-route with the eastern coast of South India. The Eastern Indian influence is seen in the inscriptions found in Arakan and as far down as Hmawza near Prome. These inscriptions are datable from the seventh century A.D. onwards. The South Indian influence is traceable in the Maunggun gold plates and the Kawgun cave inscription, both of which belong to the sixth century A.D. We may be able to detect another contact if we can decide about the origin of the Pyu writing. The medial vowels used in this writing are exclusively northern, though the medial *i* shows a variation in the local style. Letters such as *u*, *kha*, *ta*, *ya* and *la* suggest influence from Western India, possibly Chālukyan. But the letters *a*, *tha*, and the tripartite form of *ya* point to an earlier date. On the whole it seems that the original writing from which these characters are derived is connected with the source of the Vo-Canh inscription, but in course of time this writing became stylized in this region. The examples that we actually have are seventh-century versions of the original writing.

Indo-China

Apart from the Oc-èo seals already dealt with, the early inscriptions from Indo-China fall into two geographical zones: (A) Lin-i, and (B) Fou-nan. Lin-i has produced important early inscriptions, the exact dating of which has long been debated. These inscriptions can be divided into four groups.

A. (i) In the first group falls the badly preserved Vo-Canh inscription (Pl. XX. 1) which refers to a king called Śrīmāra. To this inscription

¹ See above, p. 200.

have been assigned various dates ranging from the second to the fourth century A.D. The advocates of the earlier date point to the tripartite form of the subscript *ya*. But this form was preserved in Gujarat as late as the middle of the fifth century A.D., as is attested in the Junagadh rock inscription of Skanda Gupta (Pl. XIVb. 1). D. C. Sircar¹ argues for a later date, as the record is in Sanskrit. But this argument is hardly valid when it is realized that Sanskrit was generally used in the records of the Western Kshatrapas from the middle of the second century A.D. onwards. We will first analyse the letters before assigning a date.

The letters have distinct head-marks, which are generally notched, but sometimes angular. The lower verticals of *a*, *ka*, *ra*, and the vertical type of the medial *u* do not end in curves. The only initial vowel used is *ā*, which has a hook appended below its sloping upper left side. The medial vowels are very instructive. The medial *ā* is marked both by a top slant as in *yā* and by a horizontal stroke as in *gā*. The medial *i* is a stroke curved to the left, while the medial *ī* has an additional initial prominence. The medial *u* in *ru* is a stroke sloping downwards, but in *stu* it is an upward curve going outwards. The medial *ri* is a left curve of the southern type. The medial *o* in *ko* has one of its strokes in the form of a top slant, but in *lo* it has the cursive form of the southern type. This mixture of northern and southern medial vowels points to the region of Gujarat and Malwa, where they were in actual use in the fourth century A.D. *Ka* has its central bar curved. *Ga* has equal arms with rounded and flat-topped varieties. *Na* in the conjunct *nga* has its vertical bent. *Cha* narrows the loop on the left side. *Ja* is of the three-armed type, with its vertical slightly curved in the middle. *Na* in the conjunct *ñcha* maintains its proper form with a hook on the right. *Ta* in the conjunct *shṭa* has a round back. *Ṭha* in the conjunct *shṭhā* makes a rough oval. Both *ṇa* and *na* have bent bases. *Ta* has its lower two arms meeting in an upper curve. *Tha* in the conjunct *sthā* has a dot within a circle. *Da* is round backed. The left sides of *pa*, *ba* and *ha* are bent. *Bha* is of the broad type. *Ma* has a triangular looped base with two slanting uprights. The tripartite form of *ya* has its third left arm replaced by a loop, but in the conjuncts the three uprights of this form are well preserved. *Va* has a triangular loop below a stem, and *sa* a hook on the left.

On the basis of these mixed features it is difficult to connect the

¹ *Select Inscriptions*, Calcutta, 1942, p. 471, n. 2.

script with any particular style of writing in India. The absence of curves at the lower ends of the verticals would point to North India, but this feature was also known in Malwa (Pl. XIII. 1, 2. Pl. IX. 6, 7). The equal arms of *ga*, the broad type of *bha*, the looped base of *ma*, the curved bases of *ṇa* and *na*, the left curved stroke of the medial *ṛi*, and the cursive form of the medial *o* in *lo* would connect this with the southern scripts, but all these features were also known in Central India in the fourth to fifth century A.D. The form of *ya* used here is known only from Malwa at this time. When we know that the writings of Malwa and Gujarat were connected in the fourth century A.D., because of the rule of the Western Kshatrapas, it is reasonable to suggest that the style of writing originating from this region affected the Vo-Canh inscription. The cursive form of *lo* suggests that the dating must be between the latter half of the fourth and the first half of the fifth century A.D. The use of the Sanskrit language in this inscription is well explained by contact with Gujarat.

(ii) This group includes three inscriptions—the Myson inscription of Bhadravarman (Pl. XX. 2), the Hon-Cuc inscription (Pl. XX. 3), and the Cho-Dinh inscription of Dharmamahārāja Bhadravarman (Pl. XX. 4). All these inscriptions are characterized by the square or rectangular head-marks added to the top left of the verticals. This square mark is also seen over *ga*, *tha*, *dha* and *śa*, but not over *kha*. In style there is a close connexion between these inscriptions and that from Vo-Canh, the main difference being in the head-marks. The square head-marks of these inscriptions have also given angularity to the forms of the letters. As in the Vo-Canh inscription, the lower ends of the verticals do not curve, but show a sharp cut-end, especially in the Myson inscription. The medial vowels are of the same type. We may also note the additional medial *au*, which is of the curved variety of the south. These features link this square headed type with the Deccani style of Malwa (Pl. XV. 3). Other links with Gujarat are seen in the forms of *i*, which is of the roofed type; *u*, which has its lower horizontal curved upwards; *kha*, with a broad looped base; the broad type of *cha*; *ja* having its upper curve smaller than the lower; the looped varieties of *ṇa* and *na*; and *śa* having a short mid-stroke attached to its right arm. The invariable use of the hooked variety of the subscript *ya* suggests that the date of these inscriptions should be placed slightly later

than that from Vo-Canh. The middle fifth century A.D. would be the earliest possible date for them. In the Cho-Dinh inscription we get the looped variety of *ta*, which is first seen in the late Śātavāhana records in India. Henceforward the looped varieties of *ta*, *na* and *ṇa* become common in South-east Asia. This northern link of these inscriptions is further confirmed by the title *Dharmamahārāja* adopted by Bhadravarman—a title obviously borrowed from the Vākāṭakas.¹

(iii) In this group is included the earliest Cham inscription from Dong-Yen-Chau (Pl. XX. 5). It is connected with the second group by its square head-marks and the use of similar medial vowels, except the medial *o*, which here has horizontal strokes, but the medial *au* in *tau* is of the northern variety of three distinct strokes. The letters also are of the same forms with one fundamental difference, that here the lower ends of the verticals are curved. As this style was known in Gujarat and Malwa, there is no reason to look for another source for it. The inscription may be dated to the latter half of the fifth century A.D.

(iv) In this group falls the Myson inscription of Śambhuvarman (Pl. XX. 6). Its style is much later and is connected with the early inscriptions from Fou-nan. It will be discussed along with them. B. The early inscriptions from Fou-nan can be divided into three main groups:

(i) In this group are included three series of inscriptions: Pl. XX. 7 is taken from Thap Muoi inscription of Guṇavarman; Pl. XX. 8 is derived from Ta Prohm inscription of Rudravarman, with which also agrees the Neak Ta Dambhang Dek inscription of Jayavarman² and the Myson inscription of Śambhuvarman; and Pl. XX. 9 is taken from the Tham Prasat inscription of Mahendravarman and the Phnom Banteai Neang inscription of Bhavavarman. No. 9 represents the latest in the series. There is a marked difference in the style of writing noticed in these inscriptions from that of group A. In these inscriptions only line head-marks are seen, and the influence of stylus writing is noticeable in the frequency of the notches or waves in the lines. The medial vowels are entirely southern. It is further possible to localize the origin of these medial

¹ D. C. Sircar, *Select Inscriptions*, Calcutta, 1942, p. 407.

² *Journal of the Greater India Society*, iv, no. 2, pp. 117-21.

vowels to one of the proto-regional scripts of South India. The most distinctive are the circle-type of the medial *i* and *ī* and the broad curved type of the medial *u*. These are invariably found in the Pallava records beginning from the sixth century A.D. onwards (Pl. XVIII. 5, 6). In the Kadamba records they are used optionally, while the Gorantla plate of Attivarman (Pl. XVII. 11) shows them as an influence from the Pallavas. Other medial vowels show much local development. The medial *ā* has an exceptionally long vertical, as can be seen in *sā* and *hā*, the medial *e* drops down and ends in a curl, while the medial *ai* has one stroke on the top and another below the letter, as in *lai*. No. 9 has a new type of medial *o* in *no*. It has one top stroke on the right and a lower sloping one on the left. The broad type of the medial *u* is applied not only to *bhu* and *gu* as in the Pallava records, but also to *tu*. No. 9 also shows a new type of the medial *ū* in *bhū*, which has a double curved stroke attached to its right vertical. Of the initial vowels we get only *a* and *e*. *E* has a stem over its foot-form. *A* is of two varieties: one with a small curve at the lower end of the right vertical, as in no. 7, and the other with an extended curve, as in no. 8. This difference is also maintained in the case of *la*, no. 7 having a small upward curve and no. 8 showing an extended curve. This extension of the curve in no. 8 suggests the continuation of the influence from the western coast. This influence is also to be seen in the recurrence of the looped varieties of *ṇa*, *na* and *ta*, the broad looped base of *kha*, and the narrow upper ends of *tha* and *dha*. However, it should be noted that the looped varieties of *ṇa*, *na* and *ta* were fairly well known on the eastern coast as well. The study of the consonants shows a gradual development of the letters from 7 to 9. The lower curve of no. 9 is extended farther, while *ra* in nos. 8 and 9 has doubled its vertical. *Ga* in no. 9 is of the horse-shoe type. All three arms of *ja* are waved. *Ṇa* in no. 9 has double loops as in the Pallava records (Pl. XVIIIa, 9, 11). Another remarkable development in the looped *ṇa* and *na* is seen in their right-hand hooks, which are now turned up. The cursive form of the medial *o* in *lo* is extended below the letter. Other distinguishing forms are those of *śa* and *sha*, which have short mid-strokes attached to the right verticals and are definitely derived from the Pallava records. The same is true in the case of the subscript *sha* in *ksha*. The hooked type of the subscript *ya* has an ornamental bulge on the left. On the whole the writing shows highly ornamental

forms ultimately traceable to the style known from the Pallava records of the sixth century A.D.

(ii) This is an intermediate group represented by the Han Chey and Phnom Prah Vihar inscriptions of Bhavavarman (Pl. XX. 10). It is distinguished by three features. The ornamental forms of the earlier group continue here side by side with a tendency towards simplification, seen optionally adopted in the forms of *ka* and *la*, both of which discard the superfluous curve. New forms are seen in *a*, which develops a left turn at the lower hook—a practice which recalls the fifth- to sixth-century forms from Malwa (Pl. XIII. 2-7). The form of *i* with a tail below a double curved roof also comes closer to the Malwa type. Another northern type is seen in the open-mouthed form of *na*. The northern forms are also seen in the medial *i* and *ī*, which have extended curves on the left and right respectively. The medial *ū* in *gū* and *bhū* shows the new double curved form, though the Pallava form of the broad curved type is seen in *tu*. The medial *ri* in *kri* makes a broad curve to the right. The origin of these northern features is traceable in the records of the Gurjaras of Broach (Pl. XVI. 9, 10). The date of these inscriptions lies midway between group (i) above and group (iii) below, the latter being dated in the Śaka era corresponding to A.D. 624-67. Hence (ii) may be dated towards the close of the sixth century A.D.

(iii) This is the last group of inscriptions dealt with here. Pl. XX. 11 is taken from the Bayang inscription, dated A.D. 604 and 624, and the Vat Chakret inscription of Īśānavarman. Of these the latter shows the simplified version of the writing. Pl. XX. 12 is taken from the Ang Pou inscription of the time of Īśānavarman and the Ang Chumnik inscription, dated A.D. 628. Pl. XX. 13 is derived from the Ang Chumnik inscription of Jayavarman, dated A.D. 667. In this group the two new tendencies seen in (ii) are more clearly brought out. The northern forms of the letters all continue here. The simplification is further marked in the forms of *ka* and *la*, where all the verticals are reduced to equal height—a tendency that may also be seen in the doubling of the vertical of *ra*. A new feature seen in nos. 12 and 13 is the development of an optional loop at the left corners of the open-mouthed *na*, *la* and *kha*. The extended curves are also sometimes seen, as in *a*, the medial *ā* in *jā* and *nā*, and the cursive *o* in *lo*. The right hook of *nā* in *jñā* is

extended downwards. The medial \bar{u} in $bh\bar{u}$ and $g\bar{u}$ is generally of the double-curved type, though the broad curve of the Pallava style is also occasionally seen. The medial \bar{a} in $y\bar{a}$ is attached to the third right vertical instead of the middle one. The medial o now becomes standardized with one top stroke on the right and another stroke turned downwards on the left. The curve of the medial au is extended downwards. On the whole the tendency towards linear simplification becomes more and more pronounced in this series of inscriptions. This tendency affects the development of the later regional scripts.

Borneo

Several *yūpa* inscriptions have been found in Koetei in East Borneo, four of which have been edited by Vogel. They refer to a king called Mūlavarman. Pl. XXI. 1 is taken from the illustration accompanying the article by Vogel. As we have seen, the style of writing represented here bears some connexion with that of the Bhadravarman's inscriptions from Lin-i. The resemblance can be marked in the absence of the curves at the lower verticals of *ka*, *ra*, and the vertical type of the medial *u*. Only very rarely is the curve seen in the case of *ka* and *ra*. But there is another development. At the ends of these verticals a left slant is added. The medial *i* and \bar{i} are of the same type, though here they are occasionally extended downwards, the most exceptional being in *vi*. One more link is seen in the use of the looped forms of *ṇa*, *na* and *ta*, and the broad looped base of *kha* seen in the conjunct *khyā*. A still closer link is established by the rectangular head-marks seen in these letters, but these head-marks are apparently derived from the south rather than from Malwa. Here the head-marks are not added to the top left of the verticals, but they are centrally placed over them, as is seen in the inscriptions of the Madharas and the Gaṅgas of the eastern coast of India. The link with the south is further established by the medials \bar{a} , *e*, *ai*, *o* and *au*. The medial \bar{a} (except in *shā*, where it is a top slant) and the medial *o* have their strokes extended downwards. The medial *e* and *ai* also fall down, and end in a curl. These medial vowels agree with those given in the Pallava records of the fifth to sixth century A.D. (Pl. XVIII. 4, 5). The connexion with Pallava writing is further strengthened by the forms of *ga*, the left limb of which is curved inwards, *tha* which has a mid-line in place of the central dot, and *śa* and *sha*, both of

which have a short mid-line attached to the right vertical. The Pallava form is also seen in the conjunct *ksha*, in which the subscript *sha* is broadened. The forms of the other letters agree with the southern type. Another important clue is the ornamental form of the subscript *ya* in *khyā*, which is of the hooked type. This ornamental form, with the extended forms of the medial vowels, provides a link with the inscriptions of Pūrṇavarman from Java, and further suggests that there should not be a long gap between them. The inscriptions of Mūlavarman may be dated towards the close of the fifth century A.D.

Java

The inscriptions from Java fall into two geographical zones: (A) Western Java, and (B) Central Java.

A. All these inscriptions refer to King Śrī Pūrṇavarman. They fall into two groups. The first (i) includes Pl. XXI. 2, 3, and the second (ii) Pl. XXI. 4. No. 2 is based on the Ci-Aruton inscription, and no. 3 on the Jambu and Kebon Kopi inscriptions, while no. 4 is derived from the Tugu inscription. The main difference between the first and second groups is in their head-marks, the first having those of the rectangular or thick type and the second of the notched variety. There is no difference at all in the forms of the letters. The first group establishes a link with the inscriptions of Mūlavarman. Besides the head-marks, we find a similar use of the broad-looped base in *kha* and the looped varieties of *ṇa*, *na* and *ta*. But there are other fundamental differences. The most easily noticeable is the frequency of waves in the lines. The next is recognized in the new forms of the medial vowels, derived from the Pallava records, identical with those used in B (i) group of the inscriptions from Fou-nan. Another feature is the emphasis laid on the extended curves at the lower verticals of *a*, *ka*, *ra*, *ṇa*, and the vertical type of the medial *u*. The letter-forms are also similar to those of the inscriptions from Fou-nan. But minor differences may be noted: here the subscript *ya* is of the ornamental type as used in the inscriptions of Mūlavarman, but no ornamental curve is seen in the medial *o* attached to *lo*; the double curved type of the medial *ū* as applied to *bhū* in the later inscriptions in Fou-nan is not found here; similarly, the later type of the medial *o*, having a top stroke on the right and a sloping one on the left, is also absent. In other words

the new tendencies seen in the Tham Prasat inscriptions of Mahendravarman (Pl. XX. 9) are not found here. The Chālukyan type of *a* with an extended curve of its lower right vertical is also not met here. The closest resemblance is to the inscription of Guṇavarman from Fou-nan. These features suggest a date in the first half of the sixth century A.D.

B. The inscriptions (Pl. XXI. 5, 6) discovered in this zone do not go back to a very early date. Those found are in the simplified version of the style seen in Western Java and in Indo-China.

Malaya

Apart from the single seal already described, we have three groups of early inscriptions from Malaya.

(i) Pl. XXI. 8 is taken from a stone inscription recording only the Buddhist creed. It was found in Kedah site no. 1. Here the letters are very crudely drawn. The initial *e* appears to be of the foot type. *Ga* has its right limb slightly longer than the left. *Cha* has a broad beak. *Na* is of the open-mouthed type of the north, and *ta* also is of the northern form with its two lower arms meeting in an upper curve. In *tha* the central dot is replaced by a line drawn with the same sweep of the hand as the circle. *Da* is of the double curved type but the lower curve is squattish. *Na* has a bent base, and *ma* a triangular looped base. *Ya* is of the tripartite form, and *ra* is a straight vertical. The left side of *sha* is bent. The medial vowels recall those of the Vo-Canh inscription. The writing is probably derived from Gujarat and Malwa. The use of the open-mouthed *ṇa*, *tha* with a mid-line, and the hooked type of the subscript *ya* suggests a date in the latter half of the fifth century A.D.

(ii) Pl. XI. 10 is taken from the inscription of the *mahānāvika* (great navigator) Buddhagupta. The letters have notched head-marks, and their forms agree with those of the inscriptions of Pūrṇavarman from Java. The medial vowels are also of the same type except that the ornamental extensions are not found here. The inscription may be dated in the early sixth century A.D.

There is another inscription from Kedah,¹ found in the ruins of a brick building near Bukit Mariam. Its first part is a Buddhist creed. No photograph is now available as the inscription is lost, but

¹ *J.A.S.B.*, 1849, p. 247, pl. X.

if the drawing is representative of the writing it should be dated in the sixth century A.D. We have here looped forms of *na*, *na*, and *ta*, but *na* also shows double loops, as in the Tham Prasat inscription of Mahendravarman (Pl. XXa. 9). The medial *i* and *i* are of the circle type. *E* is of the foot type with its mouth opening upwards. The medial *ā* and *e* are extended downwards. Notches are seen in the sides of *pa*, *ma*, and *va*.

(iii) Pl. XXI. 9 is taken from the tablet inscriptions found in Kedah site no. 2. The head-marks are not properly given. Wherever found, they are of the notched type. The forms of the letters show a simplified version of the seventh-century style already known from the region of Fou-nan. Important to note are the short verticals of the initial *a*, *ka*, *ra*, and *ña* in the conjunct *jña*. Western Indian forms are recognizable in the initial *i*, which has a double roof with a tail below, the open-mouthed type of *na*, *dha* with its upper end narrowed, and *la* with its upper curl extended as in the inscriptions of the Maitrakas of Valab'ii (Pl. XIVb). Another Western Indian form is the initial *ā*, which has a long vertical added on the right of the form of *a*.

Sumatra

Two groups of the dated inscriptions from Sumatra have been selected here. Both represent the simplified style of the late seventh century A.D. Pl. XXI. 11 is taken from the Kedukan Bukit inscription, dated Śaka 605 (A.D. 683), and Pl. XXI. 12 is derived from the Kotakapur inscription, dated Śaka 608 (A.D. 686), the missing letters having been supplied from the Talang Tuwo inscription, dated Śaka 606 (A.D. 684). The simplified forms of *ka*, *gha*, *ra* and *la* are worth noting. *Ka* and *la* are comparable with the late forms of the Gurjara inscriptions of Western India. The broad looped base of *kha* is also derived from the same source. Undoubted Western Indian influence is observable in the following: the initial *a*, which copies the northern form in having its left hook curving to the left; the initial *ā*, which has a long vertical added to the form of *a*; the initial *i*, which has a double roof and a tail below; the initial *u*, which has its lower horizontal curved upwards; the open-mouthed type of *na*; and *śa* and *sha* with full length mid-lines. The medial vowels are of seventh-century style, in which the important change is the replacement of the Pallava

type of the broad curved medial *u*, as applied to *bhu*, *gu* and *tu*, by the simple form as seen in no. 12. Of the other forms of the letters we may note *ña*, which has a notch in its vertical, *ñā*, which has also a notch in its right hook, *ḍha* with its base line extended and waved, and *na* with its loop closed. The left sides of *pa*, *sha* and *ha* are bent. On the whole the style shows a development towards simplification in which the tendency to reduce the letters to linear forms is evident.

Burma

The early styles of writing in Burma can be divided into three groups: (A) The writing adopted in the Sanskrit inscriptions found mostly in Arakan. Only one bilingual text, the Sanskrit being in this character, has been found at Hmawza. This style is connected with the proto-regional scripts of Eastern India. (B) The writing adopted in the Pyu inscriptions, the origin of which is discussed below. (C) The characters employed in the Pali or Prakrit inscriptions. These are derived from the Pallava records and resemble the sixth-century writing in South-east Asia. The Kawgun cave inscription has been placed in this last group, though it shows some North Indian letter forms. We have no example of early writing in the Burmese language. The later Burmese script is not derived from these characters.

A. Pl. XXII. 1 is taken from the Vesali Bell inscription; Pl. XXII. 2 from the Sandoway stone inscription; and Pl. XXII. 3 from the Sanskrit text of the Hmawza bilingual inscription. All these belong to one school of writing, though the first two inscriptions are very badly written. The nearest comparable material comes from Bengal, but it is difficult to connect them with any particular period of writing there. The inscriptions may be compared with Pl. XI. 2, 3, which represent the writing styles of the fifth and sixth centuries in Bengal. But this date cannot hold good for the Burmese inscriptions, which, though preserving the older forms, show acquaintance with tendencies that are hardly known before the seventh century in Bengal. Hence the date of these inscriptions is to be determined by this last factor. Some of the letters, especially *ga*, *dha*, *pa*, *ma*, *ya* and *sa* (very clear in no. 3) exhibit the *kuṭila* forms, while in nos. 1 and 2 we find the left triangle in *sa* with its mouth open. No. 2 also shows a rude copy of *bha* with its

triangle opening upwards. Similarly, the form of the initial *u* in nos. 2 and 3 has the curve of the horizontal extended upwards. Again the medial vowels in no. 3 are all of the seventh century. The medial *ā* is given by a *kuṭila* short vertical on the right of the letters; for the medial *o* another top slant is given over the stroke of the medial *ā*; the medial *i* is invariably a left curve extended downwards to the bottom of the letters; the medial *ī* is a right curve but not extended down; the medial *u* is also a long curve to the left, but in the case of *bhu* it is turned upwards; the medial *e* is a top slant; and the medial *ṛi* is a hook turned to the right. The vowelless consonant is shown by a mark below the letter as in *yām*. In the other two inscriptions these medial vowels are not properly given. In no. 2 the medial *i* in *pi* is a short left curve and the medial *o* is shown by two top curved strokes, as in *yo* and *ro*.

We may also note the older features in these letters. They are all characterized by line, or at best notched, head-marks, instead of the triangular head-marks of the seventh century. The initial *ā*, as seen in no. 3, has preserved the old form with its hook turned to the right. The initial *i* in no. 2 is indicated by two dots on the right and a vertical on the left, though in the correct old form the position of the dots and the vertical is reversed. *E* in no. 2 is triangular with its base downwards. *Ka* has its central bar curved. In no. 3 foot-marks can be seen in *ka*, *ta*, *bha* and *ra*. *Ga* in no. 2 has straight verticals. *Cha* is of the beaked type. *Ṣa* in no. 3 has three arms slightly bending downwards. In no. 1 the conjunct *jña* shows a developed form of the two-armed *ja*, and *ña* with only three teeth. *Ṇa* is of the open-mouthed type. Its late form is seen only in no. 3, in which the outer right hook is angular. The two lower verticals of *ta* fall from the head-mark. *Tha* is oval with a mid-line. *Da* is of the double-curved type. *Dha* in no. 2 is either a circle or a square, but in no. 3 has a developed *kuṭila* form. *Na* is of the looped type. *Bha* in nos. 1 and 3 has preserved the older angular form of the north. In nos. 1 and 2 the open-mouthed *ma* has a tail on the left. *Ya* is of the tripartite form with a loop at the third left vertical. *La* in no. 3 and *ha* in no. 2 are of the hooked type. *Va* is triangular with its base sloping towards the right. *Ṣa* has a mid-line, and *sa* in no. 3 has a triangular loop on the left. *Ṇa* in the conjunct *Ṇga* has a slight bend in its vertical. *Tha* in the conjunct *sthi* is laid flat. All these older features survive along with the new tendencies of the seventh century.

The first two inscriptions are to be dated in the later half of this century, as they show the late forms of *bha* and *sa*.

B. Blagden was the first person to decipher the Pyu inscriptions and comment on their palaeography.¹ Later, in *Epigraphia Birmanica*, vol. i, he edited the Pyu face of the Myazedi inscription, dated A.D. 1112-13 (Pl. XXII. no. 7). In *Epigraphia Indica*, vol. xii, he published the urn inscriptions from Payaggyi Pagoda near Prome (Pl. XXII. 5), which, according to his interpretation, is dated in the seventh century A.D. The one record which is definitely of the seventh century is a bilingual inscription from Hmawza, which is fairly well dated by the characters used for writing the Sanskrit words (Pl. XXII. 4). We have included one more inscription from Halingyi (Pl. XXII. 6), which appears to be slightly earlier in date. But in these inscriptions, which range from at least the seventh to the twelfth century, hardly any development in the letters is to be seen. It seems that very early a particular type of writing became associated with the Pyu language. This assumption is confirmed by the bilingual text from Hmawza, where the Pyu script shows no influence at all from the *kuṭila* character of the Sanskrit words. When was this writing derived? Blagden answered the question on the basis of the tripartite (which he calls 'anchor-shaped') form of the subscript *ya*, which he compared with the similar form in the Vo-Canh inscription. Accordingly, he maintained that the origin of the Pyu script cannot be dated later than the fourth century A.D. But it is hardly necessary to rely on the evidence of a single letter. We have to consider the general character of the writing and reduce it to a particular system. The other point which is relevant in this connexion is the use of different letter-forms in some inscriptions. This question will be discussed below.

The Pyu letters are characterized by line head-marks; very rarely do we notice the notched type. The verticals of *a*, *ka*, *ra*, and the vertical type of the medial *u* are extended downwards, ending in a loop—a feature which is hardly known in India but most probably developed from the lower curves of the verticals known in the southern scripts. Though this writing does not favour waves in the lines, acquaintance with them can be inferred from the form of *ṇa*, which has its vertical waved, *ba*, which has its left side notched, and *ha* with a bend in its left arm. The medial

¹ *J.R.A.S.*, 1912, pp. 365-88.

vowels are further instructive. What has been read as medial *i* is used profusely. It is of two types: the Halingyi inscription shows a long twisted stroke turned to the left, which recalls the stroke for *e* used in the sixth- to seventh-century inscriptions of North India; the other inscriptions uniformly have a right curve, which actually stands for long *ī* in North India. This second type of stroke occurs only once in the Halingyi inscription with the consonant *va*, which has been doubtfully read as *vī*. The medial *o* is two top curves, a form common in North India. The only other medial vowel known is *u*, which in the cases of *bhu* and *gu* is a sloping stroke added to the right vertical. In the late Myazedi inscription we find the curved type of the southern *au*, which is hardly known in India before the end of the fourth century A.D. Only two initial vowels are known. The most commonly used is the South Indian *o*-type, but, as the evidence from the Hmawza bilingual text suggests, here it stands for the initial *u*. One form of *kra* was read by Blagden as *o*, but this is hardly justified. From the late Myazedi inscription we find the form of the initial *a*, which has an upper angular hook with a line below attached to the right vertical—a form known from the Kushāṇa inscriptions (Pl. VIII. 5) and the manuscript of *Kalpanāmaṇḍitikā* (Pl. XII. 10). The following consonants are known from these inscriptions:

ka, kha, ga, gha, ṇa
cha, chha, ja . . .
. . . ḍa, ḍha (?) . . .
ta, tha, da, dha, na
pa, pha, ba, ḥa, bha, ma
ya, ra, ḷa, va, sa and ha

Kha is of the southern type, resembling a fish-hook with a horizontal line attached to its lower right vertical. Only no. 4 has a small triangular loop in place of the horizontal line. This form is known from the Kadamba and early Western Chālukyan inscriptions. *Ga* is of the northern type with a foot-mark at the left limb and the right limb longer. *Gha* shows the simple form with three uprights. The loop of *cha* below a stem is slightly tilted to the left. *Chha* has the double loop below a stem. *Ja* has three arms to the right of a vertical, the lowest one sloping down as in the North Indian forms after the fifth century A.D. *ḍa* is round-backed, with its tip falling downwards. There is hardly any difference

between the forms of *pa* and *pha*, and hence one is inclined to read the latter letter as *pa*. *Ta* shows a development from the Deccani form and agrees fully with what I have called the Chālukyan *ta*. *Tha* is a dot within a circle. *Da* is either of the double-curved type of the north or of the simple form with a longer stem and short lower curve to the right. *Dha* also is of the northern oblong form. *Na* has its left loop closed. The left sides of *pa*, *pha*, *ba*, *ḥa* and *ha* are bent. The new letter *ḥa* is formed from *ba* by the addition of a mid-line. *Bha* is of the broad type. *Ma* has a looped base, but the letter is drawn in outline by first forming the outer bend of the arms and then inserting the mid-line. The lower portion of the bend is slightly tilted to the left. *Ya* is of the tripartite form but its third left arm is replaced by a loop—a form known in Malwa in the fifth century A.D. In the late Myazedi inscription we find the third left arm of *ya* with an outer curl—a form which was known in Rajasthan and Eastern India in the sixth century A.D. What has been read as *la* actually adopts the hooked form of the northern *la* known between the fourth and fifth centuries A.D. Only in the late Myazedi inscription do we find the true form of *la*, with a curve below the shape of *ṭa*. *Va* is an elongated loop. *Sa* has a hook on the left. In these inscriptions we also find a symbol at the beginning and at the end. Both resemble the form of *om*, the first curving upwards as in the northern inscriptions, and the second downwards as in the later southern inscriptions of India. The first symbol is followed by two verticals with looped ends.

In these letter forms we find a mixture of the northern and southern types, and we also see a deliberate attempt to adapt these forms to write the Pyu language. The latest forms copied belong to the sixth century A.D. If we leave aside the form of *a*, which may be the result of simplification, there is nothing in the other letters which can suggest a date earlier than fifth century A.D. The presence of so many northern forms as well as those of the Chālukyan type suggests that the person who adopted this writing knew these different characters. The evidence further suggests that this adaptation could hardly have been made before the sixth century A.D.

As remarked before, in some Pyu inscriptions¹ each line of the Pyu alternates with another line of writing that is definitely in different Indian characters. As far as we have been able to read

¹ See *Inscriptions of Burma*, University of Rangoon, Oriental Studies Publication, no. 5, Oxford, 1956, portfolio IV, pl. CCCLVa.

them, they do not make any sequence. It appears that the letters have been used as pure alphabets, and it is doubtful whether any medial vowel is used with the consonants, except the inherent *a*. Most of the letters repeat themselves, like *ma*, *ma*, *ma* or *ta*, *ta*, *ta* or *va*, *va*, *va*, &c., or we find them in combinations with others. It is for the epigraphists to decide whether they are to be taken as musical notes. But the letters have clearly preserved certain older forms. The most remarkable is the form of *a*, which has on the right a vertical with two curved strokes on the left—a form which is seen from Aśokan times to the 1st century A.D. in India, but which in Ceylon is preserved till the fourth century A.D. Another striking feature is the form of *ya*, which is of the 'anchor-shaped' type—a long vertical within a crescent below, a type also preserved in Ceylon till a late period. All other forms, such as *ta*, *na* with a curved base, the round backed *da*, *ma* with a looped base, the straight vertical of *ra*, and *va* with a circle below a stem, are later southern forms of about the fourth to fifth century A.D. All the letters are characterized by notched head-marks. These notches are of the same style as those in the main Pyu inscription. There is no doubt that these letters were written at the same time as the Pyu inscription, as the ornamental curved flourishes of the Pyu writing had been arranged in line with these letters. The Pyu inscription itself cannot be dated earlier than the seventh century A.D. It is difficult to account for the preservation of the older forms unless these were used for some definite purpose, musical or otherwise.

C. Pl. XII. 8 is taken from Maunggun gold plates, with which the writing of the Kyundawzu plates agrees. Here the letters are characterized by line head-marks. The lower verticals of *a*, *ka*, *ra*, and the vertical type of the medial *u* have curved ends, but the right limb of *la* is reduced in height. Waves are seen in the arms of several letters. The medial vowels and the forms of the letters agree with the sixth-century style of South-east Asia, except that in these inscriptions the ornamental extensions are not to be seen. They may be assigned to the late sixth century A.D.

Pl. XXII. 9 is taken from the Kawgun cave inscription. The writing is very crude. Except for the open-mouthed type of *ma*, which must have been derived from the Sanskrit writing known in Burma, all other forms including the medial vowels are southern,

and do not appear in South-east Asia before the sixth century A.D. The date may fall in the sixth to seventh century A.D.

Siam

Three early inscriptions from Siam have been published. Pl. XXII. 11 is taken from the Pra Pathom inscription, which is in the Mon language; Pl. XXII. 10 is derived from the Srideb inscription; and Pl. XXII. 12 from the Vat Maheyang inscription; both the latter are in Sanskrit. The characters used in all of them are similar. No. 10 is in the sixth-century style of South-east Asia, showing the Pallava forms of the letters and the medial vowels, with the only difference that it does not favour ornamental extensions. The inscription may be placed in the first half of the sixth century A.D. Nos. 11 and 12 prefer the ornamental style, especially remarkable for the extended length of the verticals of the medials on the right. In no. 10 the medial *au* has been read as *o*, and the initial *o* as *u*. Here the initial *a* has a short curve at the end of the right vertical, and the hook on the left has its tip turned outwards. No. 11 has *i* with a tail below the notched roof. *Ka* is of two types—one with its lower vertical almost doubled, and the other in which the vertical is equal in length to the bends of the central bar. *Na* shows a loop at the left corner of the open-mouthed form, and the subscript *ya* is of the ornamental type as in the inscriptions of Pūrṇavarman. Except for the last form, which is probably due to the preference for ornamentation, other features place the inscription in the first half of the seventh century A.D.

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MALLERET, LOUIS, 'Aperçu de la glyptique de Oc-èò', *B.E.F.E.O.* xlv. 189-99, pl. 4.

The following inscriptions follow the arrangement of the plates.

PLATE XX

Indo-China

1. (i) Nha Trang (Vo-Canh) inscription of Śrīmāra in *Inscriptions sanscrites de Campā et du Cambodge*, by Abel Bergaigne, Paris, 1893, no. xx, pp. 16-17, pl. XX.

2. (i) Inscription of My-son (no. 1) of Bhadravarman, *B.E.F.E.O.* ii. 188-9 and pls. A and B.
3. (i) Inscription of Hon-cuc (recording the name of Bhadreśvara-svāmi), *ibid.* ii. 187 and plate.
4. (i) Inscription of Cho Dinh of Dharmamahārāja Bhadravarman in Bergaigne, *op. cit.*, no. xxi, p. 26, and pl. XXI.
5. (i) COEDÈS, G. 'La plus ancienne inscription en langue cham — inscription rupestre de Dong-yen-chau', in *A Volume of Eastern and Indian Studies presented to F. W. Thomas*, Bombay, pp. 46-49 and plate.
6. (i) Stele of Sambhuvarman of Mi-son (My-son no. 2), *B.E.F.E.O.* iii. 210-11 and plate.
7. (i) Thap-Muoi Inscription of Guṇavarman, *ibid.* xxxi. 5-6 and pls. III and IV.
8. (i) Ta Prohm Inscription of Rudravarman, *ibid.*, pp. 9-11 and pl. V.
9. (i) Phnom Banteai Neang inscription of Śrī Bhavavarman in A. Barth, *Inscriptions sanscrites du Cambodge*, Paris 1895, p. 28.
(ii) Tham Prasat inscription de Mahendravarman, *B.E.F.E.O.* xxxi, pl. I and also see *ibid.* iii. 445.
10. (i) Han Chey inscription of Bhavavarman in Barth, *op. cit.*, pp. 13-16, and pls. 1 and 2.
(ii) Inscription of Phnom Prah Vihar of Bhavavarman, in G. Coedès, *Inscriptions du Cambodge*, i. (Hanoi, 1937, 4.)
11. (i) Bayang inscription, dated Śaka 524 and 546, in Barth, *op. cit.*, pp. 34-36 and pl. 3, no. V.
(ii) Vat Chakret inscription of Īśānavarman, dated Śaka 548, in *ibid.*, pp. 40-41 and pl. 3, no. VI.
12. (i) Ang Pou inscription of the time of Īśānavarman, in *ibid.*, p. 49 and pl. 4, no. VIII.
(ii) Ang Chumnik inscription of the time of Jayavarman, dated Śaka 550, in *ibid.*, pp. 55-57 and pls. 4 and 5, no. IX.
13. (i) Ang Chumnik inscription of Jayavarman, dated Śaka 589, in *ibid.*, pp. 66-68, pl. 6, no. XI.

PLATE XXI

Borneo

1. (i) VOGEL, J. PH. 'The Yūpa Inscriptions of King Mūlavarman from Koetei', *Bijdragen*, lxxiv, 222 ff. and plates.

Western Java

The following four inscriptions are published by J. Ph. Vogel in *Publicaties van den Oudheidkundigen dienst in Nederlandsch-Indië*—i, Batavia, 1925:

2. (i) Ci-Aruton rock inscription, p. 22.
3. (i) Jambu rock inscription, p. 25.
(ii) Kehon Kopi rock inscription, p. 27.
4. (i) Tugu rock inscription, p. 32.

Central Java

5. (i) Het Sanskrit inschrift van Tuk Mas, in H. Kern, *Verspreide Geschriften*, 1917, (Martinus Nijhoff), p. 204.
6. (i) De Sanskrit inscriptie van Canggal (Kāḍu), int 654 Śaka, *ibid.*, pp. 118-20.

Malaya

7. (i) Kedah site no. 10 inscribed discs, *Journal of the Malayan Branch of the Royal Asiatic Society*, xviii, pt. i, pls. 35 and 36.
8. (i) Kedah site no. 1 stone inscription, *ibid.*, p. 7 and pl. 6.
9. (i) Kedah site no. 2 tablet inscription, *ibid.*, p. 8 and pl. 8.
10. (i) Stone inscription of *Mahānāvika* Buddhagupta, *J.A.S.B.*, 1935, pl. 3.

Sumatra

11. (i) Inscription of Kedukan Bukit (Palembang), dated Śaka 605, *B.E.F.E.O.*, xxx. 34 and pl. II.
12. (i) Inscription of Kota Kapur (Bangka), dated Śaka 608, *ibid.*, pp. 47-48 and pl. VI.
(ii) Inscription of Talang Tuwo (Palembang), dated Śaka 60, *ibid.*, pp. 39-40 and pl. III.

PLATE XXII

Burma

1. (i) Inscription on bell from Vesali, Arakan, E. H. Johnston, 'Some Sanskrit Inscriptions of Arakan', *B.S.O.A.S.* xi. 382, pl. IV. 1.
2. (i) Stone inscription from Sandoway, E. H. Johnston, *op. cit.*, p. 383, pl. IV. 2.
3. (i) Hmawza inscription (only Sanskrit words), *Inscriptions of Burma*, University of Rangoon Publication, Oxford, 1956, portfolio, no. IV, pl. CCCLVIa.
4. (i) Hmawza inscription (only Pyu words), *ibid.*
5. (i) BLAGDEN, C. O. 'The Pyu Inscriptions', *Ep. Ind.* xii. 127-32.
6. (i) Pyu inscription from Halingyi, *Inscriptions of Burma*, University of Rangoon Publication, Oxford, 1956, portfolio, no. IV, pl. CCCLVIIb.

7. (i) Pyu face of Myazedi inscription, *Ep. Birmanica*, i, pt. i, 62-63 and plate
8. (i) Maunggun gold plates, *Ep. Ind.*, v. 101.
(ii) Kyundawzu gold plate inscription, *An. Rep. A.S.I.*, 1928-29, p. 109, pl. LI.
9. (i) Kawgun cave inscription, *Inscriptions of Burma*, University of Rangoon Publication, Oxford, 1956, portfolio, no. IV, pl. CCCLVb.

Siam

10. (i) Srideb inscription, *J.A.S.B.*, 1935, pl. VI.
11. (i) COEDÈS, G. 'À propos de deux fragments d'inscription récemment découverts à Pra Pathom (Thaïland)', *Académie des Inscriptions et Belles-lettres*, Paris, 1952, pp. 27-31 and plate.
12. (i) Inscription de Vāt Maheyang, no. XXVII, pl. XXI, and pp. 51-53, in G. Coedès, *Recueil des inscriptions du Siam*, ii.

THE KHAROSHĒHĪ SCRIPT

Nomenclature

OF all the scripts of ancient India one stands alone, by virtue of the direction of its writing, which is from right to left instead of from left to right. This script was first noticed on the coins of the Bactrian Greek rulers, and hence it was called the 'Bactrian' character.¹ But as the rulers themselves, because of their connexion with India, were sometimes referred to as 'Indo-Bactrian', the same term was also applied to the script. However, it was later ascertained that 'not a single example of this writing has yet been found to the north of the Hindukush. Its use was confined to Ariana on the west of the Indus, and to the Panjab on the east.'¹ Lassen therefore preferred to call it 'Kabulian', and Wilson 'Arianian'. On geographical grounds Cunningham objected to the use of the latter two terms, and he suggested the name 'Gandharian' alphabet, so as to embrace the regions east as well as west of the Indus, where this script was current. As the language used in these inscriptions is some form of Pali or Prakrit, the script also came to be known as 'Bactro-Pali' or 'Ariano-Pali'. The present name 'Kharoshthī' is due to Bühler, who found evidence for this name in the *Lalita-vistara* (composed about the third century A.D.) and in the Chinese encyclopaedia, *Fa-Wan-Shu-Lin*, compiled in A.D. 668. But the meaning of the term is by no means certain.

Area

Sten Konow says:

The area within which we can prove Kharoshthī to have been regularly used belongs to the north-west. The easternmost limit is, in the Panjāb, at Māṇikiālā. There are two inscriptions from Kangra, where Kharoshthī is used in addition to Brāhmī, and there is another record from Karnāl, which shows that the alphabet was known farther to the

¹ Cunningham, *Coins of Ancient India*, London, 1891, p. 31.

east, and foreign conquerors from the north-west used it in a well-known inscription from Mathurā on the Jamnā, where Brāhmī was the common alphabet, also in inscriptions and coins. We even possess a Kharoshṭhī record from Patna. But the plaque on which it is written has evidently been left there by a person who came from north-west. We do not know exactly how far the use of Kharoshṭhī extended towards the west. Coins with Kharoshṭhī legends have been found in Seistan and Kandahār, but the westernmost Kharoshṭhī inscriptions which have been found are from Khawat in Afghanistan and, side by side with Brāhmī records, from the Thal valley in Baluchistan. And even here we have every reason for assuming that the alphabet was brought and used by immigrants from the east. For it is little suited for the requirements of Iranian languages, and we have nothing to show that the dialect in which most Kharoshṭhī records are written was ever spoken as a vernacular much farther east than Jalālābād. The northernmost Kharoshṭhī records come from Tīrath in Swāt and Khalatse in Ladakh, and in the south we have some fragments from Mohenjodaro in the Lārkāna district and Kharoshṭhī legends on the coins of some of the oldest of the Western Kshatrapas. But such stray instances do not prove anything more for the proper Kharoshṭhī area than the Kharoshṭhī word Lipikareṇa in the Siddhāpur edicts of Aśoka. The Kharoshṭhī area proper may be defined as extending from about 69° to 73° 30' E. and from the Hindu Kush to about 33° N., and there can be little doubt that its place of origin was Gandhāra, perhaps more especially Taxila.¹

To this area of the Kharoshṭhī inscriptions must now be added Chinese Turkestan, from the discovery there of a Prakrit *Dhammapada* in 1892 by the French traveller, Dutreuil de Rhins, and later of numerous Kharoshṭhī documents by Sir Aurel Stein. This limited area within which Kharoshṭhī was used helped in maintaining the unitary style of this writing, and there was hardly any chance for its branching out into provincial schools, as was the case with the Brāhmī.

Period

The earliest² inscriptions in Kharoshṭhī are those of Aśoka (middle of the third century B.C.) found at Mansehra and Shahbazgarhi, and the latest are those known in the inscriptions of the later Kushāṇas (third to fourth century A.D.). A few private

¹ Konow, *C.I.I.* vol. ii, pp. xiii-xiv.

² For the alleged early coins see above, pp. 59-61.

records may have been written slightly later, but already Brāhmī was adopted by the Indianized rulers in this region. In Chinese Turkestan Kharoshṭhī was kept up by the local people for some time more. But in India, when the Hūṇas appear in the fifth century A.D., no trace of Kharoshṭhī is seen.

Nature

As Bühler has shown, the Kharoshṭhī script has been found (1) in stone inscriptions, (2) on metal plates and vases, (3) on coins, (4) on cameos, and (5) on a small piece of birch-bark from a stūpa in Afghanistan and on the *bhūrja* MS. of the *Dhammapada* from Khotan.¹ To this list must be added the documents on wood, leather or paper discovered by Stein in Chinese Turkestan. In all these writings Kharoshṭhī maintains its unified character. Hardly any evolution is seen in the forms of the letters. The main variation is in the manner in which a given form is reproduced on a material, the change in the latter affecting the form. The particular manner followed in a period or on one material became a convention. This convention did not develop into different schools of writing as it was controlled by a common technical process. It is the recognition of the conventionalized strokes, or the way of writing followed in the different materials, that roughly enables us to place the different inscriptions in chronological order. The invention of the diacritic strokes for new sounds is most important in Kharoshṭhī. As this script has been used to express sounds needed in different languages, it was necessary to devise ways by which a given alphabet might be adopted to the particular need. But despite these additional strokes the main forms of the nucleus letters hardly show any evolution. The Kharoshṭhī script has only one type, but it has complete power to express any sound of Sanskrit or foreign origin. The view propounded by Bühler² that it was a popular writing as opposed to the Brāhmī, which he thought to be literary, has been rightly corrected by Rapson³ on the evidence of the Niya documents, and he has conclusively shown that Kharoshṭhī could be used for writing correct Sanskrit. But the example of classical Sanskrit quoted by him is limited to only four verses. On the other hand, some form of the local Prakrit is the chief medium through which Kharoshṭhī is now known, and it seems that it was

¹ *Indian Palaeography*, Eng. tr., p. 18.

² *Ibid.*, p. 19.

³ *Kharoshṭhī Inscriptions*, pt. iii, p. 295.

originally created to express this language. For while the nucleus letters and even the medial short vowels have separate signs for themselves, the additional letters are formed by a common diacritic stroke (an oblique stroke added to the foot of the vertical on the right), and a uniform procedure of adding a sloping stroke at the right bottom of the letters is adopted for the long vowels. This regularity suggests a later adaptation.

Technique

The Kharoshthī is a pen style of writing, in which one type of pen remained in use throughout. The manner of its use is easily detected. In the Aśokan inscriptions it leaves behind a foot-mark in the form of an upward slant at the lower end of the verticals on the left. This foot-mark must be attributed to the style of the writer rather than to the engraver, as is proved by its presence in the hand-written documents from Chinese Turkestan (Pl. XXIII. 13). When it is not found on stone or metal, it is partly due to the engraver's negligence¹ and partly to another style of writing seen in the documents. In this second style the verticals gradually thin out into curves, as is natural to a pen. It is these curves which predominate in the inscriptions of the Kushāṇa period. In such examples the medial *u* assumes the form of a loop. This loop in stone engraving sometimes becomes a triangle. In the ink style of writing seen in some potsherds from Baluchistan,² and in the documents from Chinese Turkestan the tendency is to draw the lines and the additional strokes with one sweep of the hand. It is this process which has resulted in the cursive forms of some letters, especially *sa*. However, the writer's hand may not be faithfully copied by the engraver or the metal worker, and sometimes the latter's technique or convention produces a different effect; e.g. on metal plates and vases the letters are formed by rows of dots (not shown in our plate), in steatite vases the letters are scratched with a stylus, and

¹ It must, however, be pointed out that this foot-mark in the Aśokan inscriptions is generally seen with the initial *a* (optionally) and with those consonants which have the medial *a* implicit in them. From this factual observation some (including Rapson) have taken this slant to stand for medial *ā*. But in view of the evidence from the hand-written documents this is hardly justified (see *Kharoshthī Inscriptions*, pt. iii, p. 299). Secondly, an altogether different stroke is used for lengthening the vowels in these documents. If this slant was adopted in the Aśokan inscriptions, it is difficult to understand why it was given up.

² Konow, *C.I.I.* ii, pl. xxxv.

in the coins and medals many other superfluous lines or dots are usually seen in the forms of *ma*, *ha*, and *ja*, and rarely in *ga*, *da*, *na*, and *sa*. Percy Gardner¹ took these lines and dots for lengthened vowels, and hence read *māhāraja* for *maharaja*, and *menadrāsa* for *menamdrasa*.²

Origin

The very fact that Kharoshthī was written from right to left led to the easy recognition of its relationship³ with the Aramaic script, which was the main branch of the North Semitic alphabet.⁴ This relationship was strengthened by the identity of letters such as *na*, *ba*, *ra*, and *va*, and the close similarity of a few other features, the most important being the employment of one basic form for the initial vowels in Kharoshthī, as is also the case in Aramaic. Isaac Taylor⁵ explained the circumstances under the Achaemenians, which helped in the origin of Kharoshthī and its evolution as seen in the Aśokan inscriptions. But Cunningham⁶ rightly pointed out that the expansion of the alphabet 'took place after its contact with the more fully developed system of the Indian alphabet'. It seems that Cunningham did not agree with Taylor when the latter proposed a gradual evolution of the Kharoshthī letters from the Aramaic alone or through its influence. However, the confusion could not be removed, mainly because no distinction was made between the script and the alphabet. Bühler accepted the proposal of Taylor and argued for the original and derivative signs and further added: 'with respect to the origin of the mark of aspiration I can agree with Dr. Taylor, who explains it as a cursive form of *Ha*.'⁷ Bühler further develops the idea of Taylor and explains the circumstances of the origin of Kharoshthī. He calls it a popular script, and remarks: 'If thus the Kharoshthī appears to be an alphabet, framed with particular regard to the wants of clerks, that agrees with and confirms the assumption, put forward above, according to which it arose out of the official intercourse between the scribes of the

¹ *Catalogue of Indian Coins in the British Museum, Greek and Scythian Kings of Bactria and India*, London, 1886.

² See also below, p. 264.

³ E. Thomas, *Indian Antiquities*, ii. 144-68.

⁴ D. Diringer, *The Alphabet*, 2nd ed., p. 255.

⁵ *The Alphabet*, London, 1883, ii. 252-62.

⁶ *Coins of Ancient India*, London, 1891, p. 33.

⁷ Bühler, *Origin of the Indian Brāhma*, p. 109.

Satrapas and those of the native chiefs or other authorities.¹ Though Bühler's definition of the character of the Kharoshṭhī script has been modified by us in the previous paragraph on the evidence of the documents from Chinese Turkestan, it is nevertheless true that Kharoshṭhī was originally adopted to write the local language spoken by the common people. This necessity must have been felt by the foreign conquerors who desired to establish relations with their subjects—relations demanded by administrative necessity. The local language had to be adopted for dealings with them, but the problem was to find a vehicle through which this language could be written in such a way that it was intelligible to the local people as well as convenient to learn by the administrative staff who were familiar with Aramaic. It was this necessity which created Kharoshṭhī from Aramaic, and it is mainly in the records of foreign rulers that this script was used. The script was carried as far as Mathura by the Śaka Kshatrapas and Gujarat by the Western Kshatrapas. It survived for as long as the foreign rulers were able to maintain their individuality against the growing Indianizing influences.

While Aramaic script was suited to the Aramaic language, it could hardly be used for writing the local language without making necessary changes in the values of the letters to represent the local sounds. It would have been possible to develop Aramaic by the addition of diacritic marks, but this would have led to much complication. Kharoshṭhī is not the result of this process. The letter-forms have not gradually evolved from the original Aramaic to Kharoshṭhī. In order to understand its basic character we must analyse it into an alphabet as following a certain phonology and a script as conforming to certain general principles of form and shape. Its phonology, as has been shown in Chapter 3, is identical with that of Brāhmī, and both have the same rules underlying the conjuncts and vocalized consonants. But the forms are entirely different. The whole system of Kharoshṭhī follows the pattern of Aramaic. The resemblance is not so much in the identity of forms, though a few letters are the same, but in the way in which these forms are produced. The difference in the phonology and the grammar of the local languages stood in the way of adopting Aramaic forms wholesale. The same Aramaic letters could have been taken to stand for different values of sounds, but this would have caused greater confusion, at least in the minds of the Aramaic-

¹ Bühler, *Origin of the Indian Brāhma*, p. 98.

knowing Satraps, for whose convenience the script was primarily evolved. Hence it was necessary to create the Kharoshṭhī script on the basis of Aramaic. It is only on such an assumption that we can explain the differences in the letter forms of Aramaic and Kharoshṭhī. There is no necessity for assuming a long duration between the introduction of the original Aramaic and the Aśokan Kharoshṭhī, as is done by Taylor. In fact the writing, as seen in the rock edicts of Aśoka, hardly shows any variation in forms. Minor differences seen in them are due to different hands being used and to the engravers' slips.

As we have seen, Kharoshṭhī follows the principles of Brāhmī as far as the language demands. It was the necessity of grammar that brought it closer to Brāhmī and helped in the evolution of similar vowel notation and an equal number of consonants. The conjuncts are also formed in similar ways. But the main difference is seen in the vowels. While Brāhmī has three basic forms of vowels, *a*, *i* and *u*, Kharoshṭhī has only one, the forms of the remaining vowels being obtained by the addition of diacritic strokes. In this respect Kharoshṭhī is nearer to Aramaic, but while Aramaic does not need to express the medial vowels, Kharoshṭhī has to do it according to the needs of the grammar. Kharoshṭhī also differs from Brāhmī in the application of the signs for *dirgha*, *guṇa* and *vṛiddhi*. As shown in Fig. 19, in Kharoshṭhī an extra stroke is added to the right bottom of the letters, but Brāhmī usually doubles the stroke.¹ This difference suggests that the indication of long vowels in the Kharoshṭhī script is of later origin, as it appears only in the documents from Chinese Turkestan, where it is mainly used in Sanskrit words.

The debt of Kharoshṭhī to Aramaic is not in borrowing the latter's signs wholesale for writing the local language, but in making them the basis for the evolution of its own signs. This basis will be clear from the following analysis. Out of the twenty-two letters in Aramaic one has been adopted, as shown above, as the base of the vowels. The remaining letters are distributed as follows (Fig. 19):

- (1) *ka* and (2) *ga* from *kaph* and *gimel*;
- (3) *cha* and (4) *ja* from *ṣad* and *zayin*;
- (5) *ta*, (6) *da*, and (7) *na* from *taw*, *daleth* and *nun*;

¹ See above, p. 46.

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FIG. 19.

- (8) *pa*, (9) *ba*, and (10) *ma* from *pe*, *beth* and *mem*;
 (11) *ya*, (12) *ra*, (13) *la*, and (14) *va* from *yod*, *resh*, *lamed* and *waw*;
 (15) *sha*, (16) *sa*, and (17) *ha* from *shin*, *samekh* and *he*.

Out of the remaining four Aramaic letters, '*ayin* and *ṭeth* have been discarded by Bühler. He derives *kha* from *qoph* and *śa* from *kheth*. Here *kha* is an aspirate, but it is derived separately from the Aramaic, though the other aspirates are formed by the addition of an extra stroke to the unaspirated consonants. The only exception is *tha*, which on no account can be derived from *ta*, but, on the other hand, is connected with the cerebral consonants. It seems that *tha* and the cerebral consonants (except the nasal) are to be derived from *ṭeth*. The original nasal letters are *ma* and *na*. From *na* is formed *ṇa* by extending the head forwards. Bühler says that *ṇa* consists of 'two *na* joined together'. But this does not appear to be so. This relation is not maintained through all the inscriptions. *Ṇa* appears to be formed from either *ja* or *jha*, as is perfectly clear from its later form. This same relation exists in Brāhmī.¹ The nasal *ṇa*, seen in the conjuncts *ṇika* and *ṇiga* only in the Sanskrit words, appears to be influenced by the Brāhmī form.

Thus we get: (1) the evolution of the basic form of the initial vowel, and from it other vowels with the addition of the diacritic marks; (2) one diacritic stroke for *dirgha*, *guṇa* and *vṛiddhi*; (3) seventeen letters based on Aramaic; (4) six aspirates, *gha*, *chha*, *jha*, *dha*, *pha* and *bha*, formed by the addition of a diacritic stroke; (5) three letters, *kha*, *śa* and *tha*, again based on Aramaic; (6) the four cerebral letters, *ṭa*, *ṭha*, *ḍa* and *ḍha*, based on the form of *tha*; (7) two nasals, *ma* and *na*, based on the Aramaic; (8) the nasal *ṇa*, based on the form of *ja* or *jha*; and (9) *ṇa*, suggested by the Brāhmī form. Besides these two further letters evolved; these are shown on Pl. XXIII as *ṭh'a* and *chh'a*. The first is formed by adding a stroke to the form of *ṭha*, and the second is derived from *chha* by dropping its horizontal stroke. And finally we have another diacritic stroke, an upward slant at the lower ends of the verticals on the right, to make other sounds like *g'a*, *ch'a*, *ḍ'a*, &c. A similar stroke added to *sa* I have read as *s'a* instead of *sa*. Rapson argues for another form of *k'a*, in which the stroke is added to the top of the vertical upwards instead of at the bottom. This form is also

¹ See above, p. 37.

met in the Kurram casket inscription.¹ From these practices it is clear that the original letter forms of Kharoshṭhī were based on Aramaic as far as the Indian alphabet could allow. The remaining letters were evolved by the addition of the diacritic marks.

Writing styles

The stylistic changes in the Kharoshṭhī letter forms, as seen through the centuries, are described in the following groups.

1. *Aśokan rock edicts*

Pl. XXIII. 1 is taken from the rock edicts of Aśoka found at Mansehra in Hazara district and Shahbazgarhi in the Peshawar district, West Pakistan. Round features predominate in the letter-forms, though angularity is by no means absent. It is possible that the emphasis on angularity in some letters is due to the nature of the engraver's technique. As already noticed, an upward slant at the lower end of the long verticals on the left is usually seen in some letters. This will be henceforward called the foot-mark. This foot-mark has been observed only in the case of the initial *a* and some of those consonants which have the medial *a* implicit in them. Rapson² argues that it may stand for the long *ā*. But such a foot-mark is also seen in the late Brāhmī inscriptions of North India³ and in the documents from Chinese Turkestan, where it is quite clear that it is due to the pen style. In these documents we have a separate sign for the long *ā*. Therefore this foot-mark cannot be taken for *ā* in the Aśokan inscriptions.

The initial *a* is of the fish-hook type, with the upper hook rounded or angular. The long vertical sometimes has the foot-mark. The other initial vowels do not have the foot-mark at all. The initial *i* has an additional sloping stroke across its head. The initial *u* has a stroke, either straight or slanting, added to the left bottom of the long vertical. The initial *e* has a head stroke on the top of the round curve. Another form of *e* with a horizontal stroke on the right of the vertical, as shown by C. C. Dasgupta,⁴ is not found at this time, but is seen in later inscriptions. The initial *o*

¹ Konow, *C.I.I.* ii, pl. XXIX.

² *Kharoshṭhī Inscriptions*, pt. iii, p. 299, n. 1.

³ See above, p. 149.

⁴ *Kharoshṭhī Script*, pl. I. 4. 2.

has a stroke falling from the lower half of the vertical on the left. The *anusvāra* added to *a* takes the form of the miniature *ma*, appended at the end of the vertical, or just above the end. The medial vowels have diacritic marks similar to those of the initials. Minor differences are discussed along with the consonants.

There is only one form of *ka*, a straight vertical with a line stroke on the top left and an angular hook facing downwards on the right just below the upper end. Variation is seen in this form according to the writer's preference for the round or angular shape, or because of the foot-mark. *Kha* apparently has two forms: the first resembles the form of the capital 'G' minus the short horizontal with its upper hood drawn forward, and in the second form the hood of this 'G'-form is missing. Actually in the second example the curve of the letter is straightened and drawn at an angle, and hence the difference between the two forms is merely stylistic. However, even in the later inscriptions this stylistic difference is kept up. The foot-mark is also occasionally seen. The stroke of the medial *o* runs parallel to the lower vertical. *Ga* has an upper hook which makes a loop when joined to the vertical. Variation is seen according to the writer's preference for the round or angular form, or in the presence of a foot-mark. The stroke of the medial *e* in *ge* is applied in the middle of the hook. *Gha* has an extra stroke added to the right of the form of *ga*. This is either a slant hanging down from the loop or an angular hook added to the vertical on the right. *Cha* consists of an upper curve standing on the fish-hook type of leg. The upper curve and the fish-hook are sometimes angular, and if there is any space left between the two a bar is added to link them. Sometimes the fish-hook assumes the form of a lower curve. The foot-mark is sometimes seen. Fundamentally there is no difference in the actual form, and the variation is due to the manner of drawing a given shape. *Chha* has the upper curve on a vertical which is cut by a cross bar. We find another letter formed from this *chha*. In this case the cross bar is missing. Bühler read this form as *chha*, while Hultzsich and Konow in their readings took it for the conjunct *ksha*. Though the latter reading is justified by the context, it is not warranted by the form. In this form we must recognize a new sound coming closer to *chha*, which probably stood in this region for *ksha*. Hence I transliterate it as *chh'a*.¹ *Ja* is a vertical at an incline, with an oblique stroke to the left of the

¹ See remark by Rapson, *Kharoshṭhi Inscriptions*, pt. iii, p. 302.

vertical at its upper side. This oblique stroke is sometimes curved. The long vertical also shows a foot-mark. C. C. Dasgupta¹ gives another variety of *ja* with a horizontal line added to the lower end of the vertical. This type is indistinctly seen in Mansehra R.E. V, line 19, R.E. VIII, line 35, and R.E. XII, line 1, but a careful observation shows that this horizontal stroke is nothing but the engraver's attempt at giving the foot-mark. We have no example of *jha* in the Aśokan inscriptions. *Ña* appears to be derived from *ja* or from the possible form of *jha*. In this case the strokes above the stem of *ja* are both bent. The bend over the vertical resembles the form of *na*, and hence Bühler believed that *ña* was actually double *na*. But the form as seen in Pl. XXIIIa. 8-10 is derivable from the form of *jha* as seen in Pl. XXIIIa. 11. This later form of *ña* is occasionally seen in the Aśokan inscriptions (e.g. Shahbazgarhi, R.E. I-III), with only this difference, that the vertical is below the right bend instead of the left. Stylistically we can distinguish two varieties of *ña*, one in which the left bend is a variation of the oblique stroke, and the other in which this bend is broadened. *Ṭa* consists of a vertical with a horizontal on either side, the left one towards its upper half and the right one towards the lower half. Sometimes the right stroke is missing, and occasionally a foot-mark is seen. *Ṭha* has two strokes on the upper left of the vertical. It is due to Boyer and Rapson² that we are now able to recognize the form of *ṭh'a*, which is made by adding a short vertical to the end of the lower horizontal of *ṭha*. *Ḍa* resembles the form of *ṭh'a* but with the upper horizontal stroke dropped. *Ḍha* has a horizontal stroke standing on a vertical, which sometimes has the foot-mark. The forms of *ṇa* and *na* are very close. *Na* consists of a vertical with a bent top, and *ṇa* extends the curve of the bend to the right. The foot-mark is also seen in both these letters. *Ta* has a horizontal stroke with a short vertical at either end, the left one going upwards and the right downwards. Very rarely the horizontal is inclined and the verticals slightly bent. The foot-mark is occasionally seen. *Tha* is a cross with its lower vertical slightly prolonged. In a number of places the lower vertical of *tha* has an oblique stroke added on the right. Hultzsch reads it as *thra*, but this oblique stroke is a diacritic mark and is to be distinguished from *ra* in a conjunct. Hence this letter should be read as *th'a*. *Da* resembles the form of *ta* but its horizontal dips towards the right and the two verticals are

¹ *Kharoṣṭhi Script*, pl. I, 13. 2, 3. ² *Kharoshthi Inscriptions*, pt. iii, p. 304.

curved. *Dha* is actually a cursive form of *da* with its lower vertical prolonged and an extra horizontal stroke added to the top. The foot-mark is occasionally seen. *Pa* consists of a vertical with a hook on the right at the upper end. The variation is marked according to whether the hook is curved or angular, or drawn at an angle to the vertical. The foot-mark is also seen. *Pha* has an extra stroke added to the form of *pa*. *Ba* resembles the form of *ta* but the horizontal has its right end tilted upwards and the right vertical is slightly prolonged. *Bha* shows many variations. The main form consists of a vertical with a top horizontal stroke and an angular hook at its lower half on the right. This hook is occasionally curved, and at times the vertical is inclined, with the right hook taking the form of a sloping stroke. The foot-mark is also seen. *Ma* is a semi-circle with its mouth upwards. C. C. Dasgupta,¹ following Bühler, gives variant forms of *ma*, which has either a straight or curved line on the left side of this semi-circle. These forms have been given according to the reading of Hultsch. But there is no justification for these separate lines unless they stand for diacritic marks. However, a close examination of the words in which they are seen makes it clear that the reading is not above doubt. In Shahbazgarhi R.E. VIII and XIII these lines are seen in the word read as *nama*, but *ma* in other words does not have this line. In Shahbazgarhi R.E. XII, line 2 it is seen in the word *mañati*, and in Shahbazgarhi R.E. VI, line 16 in the word *parakramatu*. A comparison with the other words where lines are seen in *ma* suggests that the actual reading should be *namam*, *maññati*, and *parakramamtu*. The real difficulty faced by the writers was in distinguishing *nma* and *nima*, and hence these attempts were made. Subsequently we shall see that the hook became the usual form for the *anusvāra*. *Ya* consists of two oblique lines meeting at an angle upwards. The foot-mark is occasionally given only at the left leg. The *anusvāra* is indicated by upward slants, one at each leg. The medial *e* in *ye* is added to the top of the left leg. *Ra* resembles the form of *ta* with its lower vertical extended farther. The *anusvāra* is sometimes indicated only by a short horizontal line below the lower vertical of *ra*. *La* is exactly the reverse of *pa*. Here the hook is added to the left of the vertical. The variation occurs in the position of the hook, either at an acute or at a right angle to the vertical, and in the presence or absence of a foot-mark. *Va* has a short horizontal stroke added

¹ *Kharoṣṭhī Script*, pl. I, 30. 2-5.

towards the left at the upper end of a vertical. The palatal *śa* has a vertical falling from either end of a horizontal line. The foot-mark is seen only at the left vertical, and the *anusvāra* is applied in the same way as in *ya*. The cerebral *sha* assumes the form of an open umbrella, while dental *sa* has a tailed head on a stem. *Ha* is the reverse of the Roman 'S'. Here the lower curve is sometimes straightened.

In the conjuncts, where the lower ends of the verticals have some other strokes, the *anusvāra* is given in the middle of the vertical, as in *kraṁ* and *vraṁ*. As we have seen, the system of forming conjuncts is the same as in Brāhmī, though the cursive forms are found here more frequently, as in *mma*, *mya* and *bhye*. When *ra* is the second element of the conjunct, it is shown by a horizontal line on the right at the lower end of the vertical, as in *tra*, *dra*, *kraṁ*, *pri*, *śru* and *vraṁ*, but when it is the first element, the usual form is shown cursorily in the middle of the vertical. The form of *va* in *tva* is very cursorily drawn. Similarly *sa* in *spa* shows only its upper tail. The most difficult conjunct to recognize is *sti*, in which *sa* is shown only by a horizontal line.

2. Indo-Greek coin legends

Pl. XXIII. 2 is taken from the coin legends of the Indo-Greek rulers, except those of Hermaeus and other later kings. Only the form of *vri* is taken from the coin of the *Vṛishṇi Janapada*.¹ The palaeography of these coins is influenced by the metallurgical technique. The letters generally show angular features. In a few letters there are minor changes from those seen in the Aśokan inscriptions. The *anusvāra*, as in *aṁ*, is indicated by a hook placed at the end of the vertical. The additional stroke of the initial *i* is marked almost horizontally in the middle of the vertical and that of *u* slants downwards. The stroke of the medial *u* in *thu* is turned up. The foot-mark is seen in *kha*, *da* and *ta*.² The most difficult features to explain are a line or a dot below *ma* and *ha* in the word *maharajasa*, a line below *da* probably to distinguish it from *ta*, a double or single stroke at the left end of the long vertical of *ja*, and a line sometimes inserted below *ga*, *na* and *sa*. It seems that

¹ J. Allan, *Catalogue of the Coins of Ancient India in the British Museum*, London, 1936, pl. XVI. 5.

² P. Gardner, *Catalogue of Indian Coins in the British Museum, Greek and Scythian Kings of Bactria and India*, London, 1886, pl. IX. 8-12.

the lines below the verticals are remnants of the foot-marks seen in the inscriptions. But in some cases the marks appear to imply some special phonetic value. The clearest example is that of *da*, which has the form identical with that of *ta* but for this horizontal line. It may therefore be assumed that this line is added to distinguish the two letters. In the case of *na*, which occurs only in the word *mena(m)drasa*, probably the correct reading is *nam* and not *na*. Similarly, in the case of *ja*, *ga*, *sa*, *ma* and *ha* some phonetic difference may be implied. If this suggestion is not accepted, we must assume that these marks became conventional in the coins, as they are not found in the inscriptions at all.

3. Indo-Greek inscriptions

Pl. XXIII. 3 is taken from the Bajaur casket inscription of the reign of Menander (only inscription nos. A, A 1 and A 2), and from the Swat relic vase inscription of Meridarkh Theodoros. The letters are scratched on steatite and show a style that was in vogue in the second to first century B.C. The forms are similar to those seen in the Indo-Greek coins, but the additional strokes below the verticals are absent here. Angularity is particularly marked in the forms of *a*, *ka* and *na*. The new letters *g'a* and *d'a* occur. The foot-mark is also seen in *da*, while it is usually cursively drawn. The most important change is seen in the form of *mu*, in which the right limb is extended upwards but the left sharply bends down with the stroke of the medial *u*. Henceforward this becomes the common form. *Ra* in the conjunct *rkhe* is just a curved line drawn across the lower vertical. The initial *u* has its left stroke drawn as if it were a bend of the long vertical.

4-8. Scytho-Parthian period

There are a large number of inscriptions falling in this period, some dated and others undated. There has been a great controversy as regards the era or eras to which these inscriptions are to be assigned. The chart shown in Pl. XXIII. 4-8, has been made in order to draw attention to the different hands that were responsible for the varying modes of writing seen in this period. In general the inscriptions fall into two categories: (a) those represented in nos. 5 and 6 show a great similarity to no. 3 above, but at the same time mark a new stage in the development of the Kharoshṭhī writing, and no. 6 especially brings us to the early years of the Christian

era; (b) no. 7 is taken from the Takht-i-Bahi inscription of the year 103, which definitely falls in about the middle of the first century A.D. No. 4 shows a late development. Its letters are much more advanced, and the characteristic use of the new letters *kh'a*, *g'a*, *t'a*, *d'a*, *dh'a*, *y'a* and *s'a*, which are formed by the addition of an oblique stroke at the right side of the lower end of the vertical, places it in line with the inscriptions of the Kushāṇa period. In no. 4 we also find the medial *u* shown by a loop and *sa* with the mouth of its head wide open. No. 8, which is taken from the Mathura lion capital inscription,¹ is difficult to date. Here the medial *u* is formed by a loop, and very rarely this loop has an open mouth, but sometimes we also meet with a simple bend. The right hook of *ka* generally slopes downwards, though occasionally we also meet with the angular form. *Kha* has no hood on the top. *Ṇa* is of the later type, with a crooked hook attached to the upper half of a vertical on the right. *Da* has two forms, one in which the horizontal is less marked, as in no. 6, and the other showing the older form with a significant horizontal line. The lower end of *dha* is drawn at an incline to the left—a form seen in the later period. These double forms can also be seen in *na*, *ba*, *bha*, *la* and *śa*. *Ya* is of the angular type. *Sa* again shows the mixed varieties. The most common is decidedly later, with its head having its mouth wide open. *Ha* occasionally has the lower curve straightened but more often it is drawn farther, as in the Kushāṇa period. The most important new feature is the use of new letters *k'a*, *g'a*, *dh'a*, *t'a*, *bh'a*, *r'a*, *ś'a*, *s'a* and *h'a*, all of which are not marked in the chart given. Some of the letters are very loosely drawn, showing a wave in the vertical, and the others show a gentle curve towards the left as the verticals descend. These features are strange, and are not seen in any other inscription of this period. I would therefore suggest that this inscription should not be taken into consideration while determining the style of the Scythian period, because its features remind us at once of the writing known in the inscriptions of the Kanishka group of the rulers. Therefore the genuineness of this inscription is not above suspicion.

The inscriptions of group (a) show some distinguishing features: the fish-hook form of the vowel base sometimes has an angular

¹ For a detailed analysis of this inscription see A. H. Dani, 'Mathura Lion Capital Inscription (A Palaeographical Study)', *Journal of the Asiatic Society of Pakistan*, v. 128-47.

head. The initial *i* has its horizontal stroke in the middle of the vertical. The initial *o* in no. 5 has its horizontal stroke added to the left middle of the vertical. The medial *u* turns its stroke upwards. The *anusvāra* is always indicated by a hook at the bottom of the letters. The consonants also show some changes. *Kha* has an upper hood in nos. 5 and 6, and in them we also see the old form of *cha*. The lower left horizontal of *tha* is optionally inclined. The right hook of *bha* is now applied at the upper half of the vertical—a style which henceforward becomes common. *Śa* has its verticals equal in length to the horizontal. The lower curve of *ha* is invariably straightened. We also meet a new conjunct *śpa*, in which *śa* is cursive, shown only by an oblique line falling down from the upper end of the vertical of *pa* on the left. In (*b*) we have the medial *u* shown by a loop. *Śa* optionally has a rounded top. *Sa* has the mouth of its head wide open. The most difficult problem raised by these inscriptions is to decide about the phonetic value of what has been read as *ṛha*. Rapson¹ prefers to read it as *ph a*. But, as we have seen before, the phonetic difference from *pha* would normally be shown by adding an oblique stroke on the right at the lower end of the vertical. This clear departure, in which we find a combination of a *ṛa* with an angular hook on the right with its mouth upwards, argues for a conjunct. Rapson's reading was influenced by the Greek legend on the coin of Gondophares, but from the palaeographical point of view this reading is not justified. Although, of course, the form of *ha* is not at all clear in the conjunct, *ṛha* appears to be a better reading.

9-12. *Kushāṇa period*

The inscriptions of this period can be classified in four groups: (*a*) Those inscriptions which mention the name of Kushāṇa, Khushāṇa, or Gushāṇa, or those dated after the year 122, beginning from the Panjar inscription (Konow, no. B. XXVI). Pl. XXIII. 9 represents this group. The Takht-i-Bahi inscription, described above, shows a writing very similar to that of the present group. (*b*) This group includes the stone inscriptions dated in the new series and referable to the time of the Kanishka group of the rulers. The writing here generally continues the style of (*a*), though some new influences from (*c*) are also traceable. It is represented here by Pl. XXIII. 11. Of the inscriptions falling in this

¹ *Kharoshthi Inscriptions*, pt. iii, p. 307.

[illegible]

FIG. 20

group the Mamane Dheri pedestal inscription (Konow, C. LXXXVIII) shows great similarity to those of the next group. (c) This group is represented by Pl. XXIII. 10, 12, which introduce the true Kushāṇa style of the time of the Kanishka group of the rulers. To this group belongs the Bimran vase inscription (Konow, B. XVII), and its date lies in this period. No. 12 is the latest in the series and has some connexion with the writing known from Chinese Turkestan, discussed below. The dominant feature of this writing is the characteristic bend of the lower end of the verticals towards the left. The medial *i*, as in *nīm* in no. 10, is occasionally given at the left end, in place of the middle as before. Rapson¹ correctly recognized the form of *visarga*, as in *nah* in no. 12. Here the two dots placed side by side are given on the top of the letter. The medial *u* in no. 11 assumes the form of a triangle. In no. 12 *ka* joins the left horizontal and the right hook in a single curved stroke—a form which is commonly found in the manuscript writing from Chinese Turkestan. *Kha* here always has an upper hood. In no. 11 *jha* is the reverse of *ñā* as seen before. This form of *jha* with a vertical on the right and a curved stroke on the left is the usual form in the manuscripts. Generally the right horizontal of *ṭa* is not shown. In no. 12 *d'i* is drawn cursively in a single sweep of the hand, and *ṇa* has an insignificant tick in place of the head curve. In nos. 10 and 11 *da* is just a straight line with the characteristic bend at the lower end. *Ya* in nos. 11 and 12 has a flat top, and it is hard to distinguish it from *śa*. The left vertical of both *ya* and *śa* have the usual bend. *Sa* is drawn very cursively with the mouth of its head wide open. *Ra* in the conjuncts such as *rva*, *rya*, and *rtha*, is drawn with a loop at the junction of the vertical. Of all the new conjuncts the most remarkable are those with *ya* as the second element. It is of one type in no. 10, as in *sya* and *shya*, which have a curved stroke beginning with a loop and turning to the left, but in no. 12 the additional hooked stroke is turned to the right, as in *pya*, *sya*, *kya* and *lya*. (d) The last group of the Kushāṇa period includes those inscriptions which are dated in the series 303 to 399, beginning with the relic casket from Charsadda² of the year 303. As these inscriptions continue the style of the stone inscriptions of (b), they have not been represented in the chart. But their dates fall after the time of the Kanishka group of

¹ *Kharoshthi Inscriptions*, pt. iii, p. 300.

² *Epigraphia Indica*, xxiv. 8-10.

rulers. Here also we get the flat-topped *ya*, the open-mouthed *sa*, and the looped type of the medial *u*.

13. *The manuscript style*

Pl. XXIII. 13 is taken from pl. I of the *Kharoshṭhī Inscriptions* from Chinese Turkestan, edited by Boyer, Rapson and Senart. These letters are given in order to show the manuscript style, as it was known during or immediately after the Kushāṇa period. As has been pointed out by Rapson, the style bears great similarity to the writing seen in no. 12 above, but it is in this pen style that we learn all those minute details which are the natural results of writing with the pen, but which are not faithfully reproduced in no. 12 above. No attempt is made here to distinguish different hands in the manuscript, nor have I tried to reproduce all the letter forms from the manuscript. For this second purpose I reproduce the chart¹ prepared by Rapson, who has collected in one place the different letters occurring in the manuscript (Fig. 20). Here my purpose is simply to emphasize the important aspects of the manuscript writing. Some general characteristics are to be noted first. The verticals either end in a slight upward slant on the left, or gently curve towards the left. The horizontals also show slight curving, and the additional strokes, as in *e*, *g'a* or *ñe*, are drawn with one sweep of the hand, leaving a closed loop at the end of the verticals. The medial *i* is sometimes given at the left of the letters instead of across the middle. The general tendency is to simplify writing rather than to develop an ornamental form. As a result of this last tendency the medial *e* is added, as in *ñe*, at the lower end of the vertical; both *ya* and *śa* have rounded tops; both *ta* and *va* sometimes lose their horizontal (generally one); *ta*, *da* and *na* have almost identical forms—a double-curved vertical; the head of *sa* is very cursively drawn, and *ha* develops a tail at the end of the lower curve. On the whole the manuscript style shows that the writing traced in the inscriptions was not far removed from the pen style known at the time.

Conclusion

In the above description and the chart given in Pl. XXIII an attempt is made to point out different tendencies, as they

¹ Some of the signs were wrongly interpreted by Rapson, e.g. no. 221 is now correctly read as *ly'a*, no. 182 as *tg'a*, no. 192 as *ts'a*, no. 250 as *l'sa*. The chart is thus partially out of date.

developed through the centuries during which Kharoshthī was in vogue. The inscriptions selected, with one exception, are those which are definitely dated. The forms given in the chart are my own reproductions of the letters as finally ascertained after examining the different examples. It has been my endeavour to reconstruct the most usual form of the letters, out of which the individual writers created their own style of writing. In these general forms Kharoshthī maintains a uniformity throughout the periods that it was in use. This uniformity of the Kharoshthī, as opposed to the changing forms of the Brāhmī script, speaks of a wider cultural unity in this region.

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2. (i) Coin legends of the Indo-Greeks, except those of Hermaeus and other late rulers, Percy Gardner, *Catalogue of Indian Coins in the British Museum, Greek and Scythian Kings of Bactria and India*, London, 1886.
3. (i) The Bajaur casket of the reign of Menander by N. G. Majumdar in *Epigraphia Indica*, xxiv. 1-8 (only nos. A, A 1 and A 2). For correction see Sten Konow in *New Indian Antiquary*, ii. 647.
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4. (i) The Bajaur casket inscription (the remaining inscriptions), op. cit.
(ii) Taxila copper plate inscription of a Meridarkh, Konow, *C.I.I.* ii. 5 and pl. I.
5. (i) Shahdaur inscription of Damijada, dated year 60, *ibid.*, p. 16 and pl. III.
(ii) Shahdaur inscription of Śivarakshita, *ibid.*, p. 17 and pl. III.
(iii) Mansehra inscription of the year 68, *ibid.*, p. 20 and pl. IV.
(iv) Fatehjang stone inscription of the year 68, *ibid.*, p. 22 and pl. IV.
6. (i) Taxila copper plate inscription of Patika, dated year 78, *ibid.*, pp. 28-29 and pl. V.
7. (i) Takht-i-Bahi inscription of Gudavhara, dated year 103, *ibid.*, p. 62 and pl. XII.
8. (i) Mathura lion capital inscriptions of the time of Rajula, *ibid.*, p. 48, pls. VII-IX.

9. (i) Taxila silver scroll inscription of the time of the great king Khushāṇa, year 136, *ibid.*, p. 77 and pl. XIV.
(ii) Taxila gold plate inscription, *ibid.*, p. 86 and pl. XVII.
10. (i) Sui Vihar inscription, dated in the 11th year of the reign of Kanishka, *ibid.*, p. 141 and pl. XXVI.
11. (i) Ara inscription of Kanishka son of Vajheshka, year 41, *ibid.*, p. 165 and pl. XXXII.
12. (i) Wardak inscription of the reign of Huvishka, year 51, *ibid.*, p. 170 and pl. XXXIII.
13. (i) *Kharoshṭhī Inscriptions*, pt. i edited by A. M. Boyer, E. J. Rapson, and E. Senart, Oxford, 1920; pt. ii published in 1927; and pt. iii in 1929.










APPENDIX

GLOSSARY OF TERMS

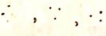













IN this glossary only those terms have been included which are used in the text several times, but are described only once when they first occur. These terms, along with their forms, are collected here for easy reference and clear understanding of the text. They have been arranged in the order of the Sanskrit alphabet.






















a, ā

- 𑀅 Angular *a* of the Aśokan period, in which the two left strokes meet the right vertical at the same point.
- 𑀆 Curved *a* of the Aśokan period, in which the two left curves meet the right vertical at the same point.
- 𑀇 Curved *a* with the two left curves bifurcated.
- 𑀈 Curved *a* of the Kushāṇa period, in which the upper left curve is broader than the lower.
- 𑀉 Angular *a* of the Kushāṇa period, in which the lower stroke on the left is occasionally missing.
- 𑀊 Angular form of the early Gupta *a*.
- 𑀋 Hooked type of *a*, in which the lower curve on the left is appended from the upper as a hook turned to the right.
- 𑀌 Ornamental *a* in which the lower hook has a graceful bend.
- 𑀍 Curved type of the later *a*, in which the lower hook is turned to the left.
- 𑀎 Curved *a* which projects the two arms of the lower curve or hook beyond the left vertical.
- 𑀏 Curved *a* of the eastern variety, which has its lower curve extended farther and the middle bar sloping to the right.
- 𑀐 The *kuṭila* form of the previous type, in which the right vertical is bent.
- 𑀑 The tailed variety of the previous type, in which the right vertical is extended farther down.
- 𑀒 The southern variety of *a* with its right vertical curved or bent.
- 𑀓 The later southern variety of *a* with the right vertical with extended curve.

-  The later southern variety of *a* with the right vertical doubled at the lower end.
 The later southern variety of *a* with the right vertical with an angular double bend.
 *a* with a triangular knot at the left—a development from the angular variety of Kushāṇa times.
 Open-mouthed *a*, in which the knot in the previous type opens its mouth.
 Previous type of *a* with its right vertical double ruled.
 *kā* with horizontal type of the medial *ā*.
 *kā* with top slant of the medial *ā*.
 *kā* with the horizontal medial *ā* with a tick on the right.
 *kā* with the right vertical of the medial *ā*.

i, ī

-  Three-dot type of the initial *i*, in which the dots are arranged trianglewise.
 Initial *i* of the southern caves, in which a dot is placed on either side of a vertical.
 The previous type of *i*, in which the lower end of the vertical is bent.
 Gupta type of *i*, in which two dots are placed on the left of a vertical.
 Late initial *i* of the north, in which two dots are above and a tailed one below.
 Roof type of the southern *i*, in which two dots are below a curve.
 Roof type of *i* in which the roof is flat.
 The double roof type of *i*, in which the top curve is doubled.
 The roof type of *i* with a tail, in which a tail drops from the right curve to meet the right dot.
 *vi* with the tall curved flourish of the medial *i*, first seen in the Mathura Kshatrapa inscriptions.
 *vi* with the left curve of the rounded medial *i*.
 *vī* with the right curve of the rounded medial *ī*.
 *vi* with the circle type of the medial *i*.
 *vī* with the circle type of the medial *ī*, in which an additional line, a small circle, or a dot is given in the middle.

-  *vi* with the curled up form of the medial *i*.
 *vī* with the curled up form of the medial *ī*.
 *vī* with initial prominence in the right curve of the medial *ī*.
 *vi* with the left curve of the medial *i* extended downwards.
 *vī* with the right curve of the medial *ī* extended downwards.
 *vī* with the broad curve of the medial *ī* of the south.
- u, ū*
-  Angular *u*, in which the horizontal and the vertical make an angle.
 Initial *u* with its angle rounded.
 Initial *u* with its horizontal or base bent (or curved) down.
 Initial *u* with its base turned up.
 Initial *u* with its downward curve extended farther.
 *ku* with the horizontal type of the medial *u*.
 *ku* with the crooked type of the medial *u*.
 *ku* with the extremely curved type of the medial *u*.
 *pu* with the vertical type of the medial *u*.
 *pu* with a curved tip in the vertical type of the medial *u*.
 *pu* with the doubling of the vertical type of the medial *u*.
 *pu* with the double ruled variety of the vertical type of the medial *u*.
 *bhu* with the broad curve of the medial *u*.
 *pū* with the left curve attachment to the vertical type of the medial *u*.
 *gū* with the curved attachment on the right of an up-turned medial *u*.



bhū with the double curved form of the medial *ū* known from South-east Asia.

ri



kṛi with the curved medial *ri*.



kṛi with the hooked type of the northern medial *ri*.



kṛi with the round curved type of the southern medial *ri*.

e, ai

△, Δ, ▽ Initial *e* of the triangle type.



Flat-topped variety of the initial *e*.



Initial *e* with a top stem on the right.



Initial *e* of the *kuṭila* type.



Tailed variety of the previous *e*.



Broad or foot type of the initial *e*.



Foot type of the initial *e* with its mouth open.



pe with the horizontal type of the medial *e*.



pe with the top slant of the medial *e*.



pai with the top slants of the medial *ai*.



pe with the twisted slant (or stroke) of the medial *e*.



pe with the medial *e* with a left curve ending in a curl, found in the south.



pai with two left strokes both having curled ends, but the lower one going downwards.























o, au

















Initial *o* with its vertical slanting.












Initial *o* with its angles rounded.

-  Initial *o* with its base curved down.
-  Initial *o* with the base curve extended farther.
-  *ko* with two horizontal strokes for the medial *o*.
-  *go* with horizontal line for the medial *o*.
-  *po* with two top slants for the medial *o*.
-  *po* with twisted (or ornamental) slants for the medial *o*.
-  *pau* with three top strokes for the medial *au*.
-  *pau* with three ornamental strokes for the medial *au*.
-  *lo* with the southern cursive type of the medial *o*.
-  *pau* with the southern curved variety of the medial *au*.
- ka*
-  Cross type of *ka* with equal arms.
-  *ka* with a lengthened vertical.
-  *ka* with a tapering vertical, or the so-called 'dagger-shaped' variety.
-  *ka* with a curved bar.
-  *ka* with the lower end of the vertical curved.
-  *ka* with the curve of the vertical extended.
-  *ka* with the doubling of the lower end of the vertical, seen in the proto-Kannadi type.
-  *ka* with a double ruled vertical, seen in the *grantha* writing.
-  Looped variety of *ka*.
-  Looped variety of *ka* with a tick on the right.
-  Tailed sub-variety of the looped *ka*.
-  *Kuṭila* sub-variety of the looped *ka*.







kha

-  Round-topped *kha* without a dot.
 Round-topped *kha* with a dot.
 Round-topped *kha* with a circle.
 Round-topped *kha* with a triangle.
 *kha* having a prominent triangular base.
 *kha* having a prominent upper hook.
 *kha* with a foot-mark at the left limb.
 Flat-topped *kha* with a foot-mark at the left limb.
 Flat-topped *kha* with the angles of the triangle rounded.
 *kha* with an outward triangle having its mouth open and joined by a bar to the right vertical.
 Tailed variety of the northern *kha*.
 *kha* with a quadrangular (or broad) looped base.
 *kha* with a horizontal line added to the left side of the lower end of the vertical.
 *kha* of the proto-Kannadi type, having a loop at the end of the lower horizontal.




ga

-  Angular type of *ga*.
 Round-topped *ga* with equal arms.
 Horse-shoe type of *ga*.
 *ga* with its right limb extended.
 *ga* with a foot-mark at the left limb.
 Flat-topped *ga* with the right limb extended and a foot-mark at the left.
 *Kuṭila* variety of the northern *ga*.
 *ga* with the left vertical curved inwards.
 *ga* with the left vertical curved outwards.










gha

-  Round bottomed *gha*.
 Flat-bottomed *gha*.
 *gha* with its right half sloping and its left curving.
 *Kuṭīla* variety of the northern *gha*.
 Tailed variety of the northern *gha*.
 *gha* with its left vertical bent.







ṇa

-  *ṇga* with two armed *ṇa*.
 *ṇga* with *ṇa* with its upper arm merged in the head-mark.
 *ṇka* with *ṇa* with its vertical bent.







cha

-  *cha* with a semi-circular loop.
 *cha* with a triangular loop.
 *cha* with a quadrangular loop.
 Beaked type of *cha*.
 Rounded variety of the beaked type of *cha*.
 Broad type of *cha* found in the south.
 Foot type of *cha* with its mouth open.
 *Kuṭīla* variety of the northern *cha*.
 Tailed variety of the northern *cha*.


chha

-  *chha* with an oval at the base.
 *chha* with a double loop at the base.
 *chha* with a notched head-mark.
 The double-looped *chha* with its stem on the left loop.
 The double-looped *chha* with its left loop bigger than the right one.
 *chha* with its left loop triangular and the stem dropped.





ja

-  *ja* with three arms.
 Double-curved *ja*.
 Three-armed *ja* with the lower arm bent down.
 Three-armed *ja* with the upper arm merged in the head-mark and the lower two arms bent down.
 Tailed variety of the northern *ja*.
 Notched variety of the southern *ja*.

jha

-  Angular variety of *jha*.

ña

-  *ña* with an angular right hook.
 *ña* with the lower end of the longer vertical curved.
 *jña* with the looped variety of *ña*.
 *ñcha* showing the full type of *ña*.



ñcha showing the cursive type of *ña*.

ṭa



Semi-circular type of *ṭa*.



Angular variety of *ṭa*.



Flattened variety of *ṭa*.



Flat-topped *ṭa*.



Flat-topped *ṭa* with a tick on the right.



Notched variety of *ṭa*.

ṭha



Circular type of *ṭha*.



Circular *ṭha* with a triangular head-mark.



Circular *ṭha* with an upper stem.

ḍa



Stepped variety of *ḍa*.



ḍa with its lower side curved.



Round-backed *ḍa*.



ḍa with a lengthened leg.



Rounded *ḍa* of the south.



Notched variety of *ḍa*.

ḍa



ḍa of the Aśokan type.

ḍha

ḍ *ḍha* with an angular back.

ḍ *Round-backed ḍha.*

ḍ *Notched variety of ḍha.*

ṇa

ṇ *ṇa* with two straight horizontals.

ṇ *ṇa* with insignificant horizontals, seen only in Ceylon.

ṇ *ṇa* with its base bent.

ṇ *The italic ṇ-type of ṇa.*

ṇ *The cursive form of the Kushāṇa ṇa, in which the upper horizontal breaks into two curves.*

ṇ *Open-mouthed type of ṇa.*

ṇ *Looped variety of the southern ṇa.*

ṇ *Looped variety of the open-mouthed ṇa of the north.*

ṇ *Open-mouthed ṇa with its outer curves extended.*

ṇ *Open-mouthed ṇa with its base sloping and the right outer curve angular.*

ṇ *Double-looped variety of the southern ṇa.*

ṇ *ṇa with the cursive variety of the three-toothed ṇa.*

ta

ṭ *Angular ta with the two lower appendages making an angle.*

ṭ *ta having a sloping vertical with a slanting stroke on the right.*

ṭ *Curved ta with its two lower appendages meeting in an upper curve.*

ṭ *Deccani variety of ta, which has always a curved hook on the right.*

ṭ *A sub-variety of the Deccani ta showing a closed loop on the left.*

- ॐ Looped variety of the Deccani *ta*.
 ॐ Chālukyan *ta*—a development from the Deccani *ta*.
 ॐ The northern *ta* with its right limb prolonged.
 ॐ *Kuṭila* variety of the northern *ta*.
 ॐ Proto-Nāgarī *ta* having an angular hook on the left of a vertical.
 ॐ A cursive sub-variety of the above *ta*.











tha

- ॐ *tha* with a circle having a dot within.
 ॐ Oval *tha* with a mid-line.
 ॐ Bulged form of *tha*.
 ॐ Bulged form of *tha* with an inner loop.
 ॐ Tailed variety of the bulged form of *tha* with an outer loop.
 ॐ Quadrangular *tha* with a short mid-line.
 ॐ Notched variety of the quadrangular *tha*, in which the upper end is narrowed.
 ॐ A rough oval *tha* with an inner loop.
 ॐ Spiral form of *tha* with its end drawn inwards and mouth open.









da

- ॐ Angular *da* of the Aśokan period.
 ॐ Rounded *da* of the Aśokan period.
 ॐ Angular backed *da* with mouth open to the right.
 ॐ The round *da* with its mouth open to the right.
 ॐ The double-curved *da*.
 ॐ The double-curved *da* with its tip turned up.
 ॐ The tailed variety of the double-curved *da*.





dha

-  *dha* of the Roman capital 'D' type.
 *dha* of the later regular type.
 Oblong *dha*.
 *dha* with its lower end narrowed.
 Triangular variety of *dha*.
 Deccani *dha* with its left arm curved.
 The bulged form of *dha* with its right arm bent.
 Tailed variety of the bulged form of *dha*.
 *dha* with its upper end narrowed.
 Notched variety of broad *dha*.

na

-  *na* with a horizontal base.
 *na* with a bent base.
 Looped variety of *na*.
 *na* with a closed loop at the base.
 Head-type of *na*.
 *Kuṭila* variety of the head-type of *na*.
 *na* with an angular base.
 *na* with an insignificant horizontal, seen only in Ceylon.

pa

-  Curved type of *pa*.
 Angular type of *pa*.
 Angular *pa* with equal arms.
 *pa* with its left arm bent.

ㄣ Notched variety of *pa*.

ㄤ *Kuṭila* variety of *pa*.

ㄥ Tailed variety of *pa*.

pha

ㄮ Curved type of *pha*.

ㄯ Angular type of *pha* with equal arms.

ㄺ Notched or ornamental variety of *pha*.

ㄻ *Kuṭila* variety of *pha*.

ㄼ *Kuṭila* variety of *pha* with an outer loop.

ba

□ Square type *ba*.

▭ Rectangular type of *ba*.

ㄿ *ba* with its left arm notched or bent.

ㄿ Notched variety of the southern *ba*.

ㄿ *ba* with its left arm deeply curved in.

bha

ㄿ *bha* with a notched or slanting head.

ㄿ *bha* with a straight vertical on the right.

ㄿ Deccani *bha* with the stem on the right side of the broad appendage.

ㄿ Broad type of *bha*.

ㄿ Notched variety of the broad type of *bha*.










ㄿ Angular variety of *bha* with its right arm lengthened.

ㄿ The angular *bha* with a triangular foot-mark at the left limb.














ㄿ Angular *bha* with its right arm curving from the triangular foot-mark of the left limb.

ㄿ Open-mouthed *bha*.


ma






















-  Girnar or Nanaghat type of *ma*.
 *ma* with a triangular looped base.
 The southern cave type of *ma*, having a mid-line within a U-shape.
 Broad-looped *ma* with its loop tilted to the left.
 Notched variety of the broad looped *ma*.
 Open-mouthed *ma*.
 Open-mouthed *ma* with a curve or half circle at the left.
 Tailed variety of *ma*.
 *Kuṭīla* variety of *ma*.

ya









-  Crescentic or anchor-shaped *ya*.
 Segmented or double-curved *ya*.
 Wedge-shaped *ya*.
 Flat-bottomed *ya*.
 Tripartite *ya*.
 Tripartite *ya* with the left arm curled inwards.
 Tripartite *ya* with a loop at the left arm.
 *ya* with a slanting right half and curving left half.
 *ya* having an outer curl at the left arm.
 Hooked variety of *ya*.
 Hooked (or bipartite) variety of *ya* with a bend at the right vertical.
 *ya* with its left arm merged in the loop.
 Proto-Kannadi *ya* with a small loop at the notched base.

ra










-  Serpentine vertical of *ra*.

-  Straight vertical of *ra*.
 The so-called cork-screw type of *ra*.
 *ra* with its lower end curved.
 *ra* with the lower curve extended.
 *ra* having doubled vertical.
 Doubled ruled variety of *ra*.
 *ra* with a triangular foot-mark.
 *ra* with a slant at the foot.
 Tailed variety of *ra*.
 Tailed *ra* with a slant on the left.
- la*
-  Round bottomed *la*.
 Curved variety of the round bottomed *la*.
 Angular *la* of the Mathura Kshatrapa inscriptions.
 *la* with its right vertical curved inwards.
 *la* with its upper curve extended.
 *la* with its curve circling around.
 Equal-armed *la* of the north with a firm base.
 *la* with its left hook broadened.
 *la* with its base sloping and the left hook curving gracefully.
 The Pallava variety of *la* with its upper curve angular.
 Hooked variety of *la*.






va

-  *va* with a circular appendage.
 *va* with a triangular base.
 *va* with a long loop.
 Triangular variety of *va*.
 Triangular *va* with its base sloping to the right.
 Rounded *va* of the later time.
 *Kuṭila* and tailed variety of the rounded *va*.
 *va* with a broad body.








śa

-  Angular variety of *śa*.
 Round-topped variety of *śa*.
 *śa* with its right arm lengthened.
 *śa* with a foot-mark at the left limb and the right limb longer.
 Equal-armed *śa*.
 Flat-topped variety of *śa*.
 Looped form of *śa*, in which the upper left loop is joined by a bar to the right vertical.
 *śa* with its left arm curved inwards.
 *śa* with its left arm curved outwards.








sha

-  *sha* with a double curve.
 Equal-armed *sha* with a full length mid-line.
 *sha* with its left arm bent.
 *Kuṭila* variety of *sha*.
 Tailed variety of *sha*.

sa

-  *sa* with a left hook.
 Equal-armed *sa* with an acute angle at the right bottom.
 Looped variety of *sa*.
 *sa* with a triangular loop.
 *sa* with a closed triangular loop.
 Open-mouthed *sa*.
 Equal-armed *sa* with a left hook (or hooked *sa*).

ha

-  Round bottomed *ha* with a tick on the right.
 Angular *ha* with firm base of the three-limbed form.
 Equal-armed *ha* with its right tick curving down.
 Hooked variety of *ha*.
 *ha* with its left arm bent.
 *ha* with its base dipping on the right.
 Tailed variety of *ha*.

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PLATES

THE INDUS SCRIPT

A. STYLISTED LIVING BEINGS

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II	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
III	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
IV	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
V	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
VI	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
VII	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
VIII	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15

2. FISH SIGNS

3. BIRD SIGNS

4. INSECT SIGNS

5. SNAKE SIGN

6. CRAB SIGNS

8. QUADRUPED SIGNS

B. STYLISTED OBJECTS

1. JAR































IX	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
X	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
XI	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
XII	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15

2. CONTAINER

THE INDUS SCRIPT

PLATE 16

B. STYLISTED OBJECTS

3. UMBRELLA			4. DIVINITY EMBLEM			5. HORN		
I	1		2		3	4	5	6
II	7		8		9	10	11	12
III	13		14		15	16	17	18
9. HARP			10. HAND			11. LOTUS BUD		
I	1		2		3	4	5	6
II	7		8		9	10	11	12
III	13		14		15	16	17	18
12. SPOKED WHEEL			13. WHEELED VEHICLE			14. BOW AND ARROW		
I	1		2		3	4	5	6
II	7		8		9	10	11	12
III	13		14		15	16	17	18
16. SHRIMPING NET			17. HILL			18. MUSHROOM		
I	1		2		3	4	5	6
II	7		8		9	10	11	12
III	13		14		15	16	17	18
19. PLANT			20. WATER			21. CHAIR		
I	1		2		3	4	5	6
II	7		8		9	10	11	12
III	13		14		15	16	17	18

C. OVALS AND THEIR PARTS

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
I															
II															
III															
IV															
V															

D. TRIANGLES, ANGLES & CROSSES

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
VI															
VII															
VIII															
IX															
X															

READINGS

1.		2.		3.		4.	
5.		6.		7.			

THE INDUS SCRIPT

E. QUADRANGLES & THEIR PARTS

I	1															
II	1															
III	1															
IV	1															
V	1															
VI	1															
VII	1															
VIII	1															

F. NUMERALS, BRACKETS & OTHERS

IX	1															
X	1															
XI	1															
XII	1															
XIII	1															

THE AŚOKAN BRĀHMĪ

1	A	Ā	I	U	E	O	KA	KHU	KHA	GA	GHA	CHĀ	CHHA	JA	JE
	𑀅	𑀆	𑀇	𑀈	𑀉	𑀊	𑀋	𑀌	𑀍	𑀎	𑀏	𑀐	𑀑	𑀒	𑀓
2	𑀅	𑀆	I		E		KA	KHA	GE	CHA	CHA	CHHA	JA		
	𑀅	𑀆			𑀉		𑀋	𑀍	𑀎	𑀏	𑀐	𑀑	𑀒	𑀓	𑀔
3	A	Ā	I	U	E	O	KĀ	KHU	KHĀ	GĀ	GHAṀ	CHĀ	CHU	CHHA	JA
	𑀅	𑀆	𑀇	𑀈	𑀉	𑀊	𑀋	𑀌	𑀍	𑀎	𑀏	𑀐	𑀑	𑀒	𑀓
4	A	Ā	I	U	E	O	KAM	KHA	GO	CHA	CHU	CHHI	JA	JĀ	
	𑀅	𑀆	𑀇	𑀈	𑀉	𑀊	𑀋	𑀌	𑀍	𑀎	𑀏	𑀐	𑀑	𑀒	𑀓
5	A	Ā	I		E		KI	KHI	GO	CHA	CHE	CHA	CHHI	JŪ	
	𑀅	𑀆	𑀇		𑀉		𑀋	𑀍	𑀎	𑀏	𑀐	𑀑	𑀒	𑀓	𑀔
6	A	Ā	I	U	E	O	KO	KHU	KHO	GO	CHAM	CHU	CHHE	JĀ	
	𑀅	𑀆	𑀇	𑀈	𑀉	𑀊	𑀋	𑀌	𑀍	𑀎	𑀏	𑀐	𑀑	𑀒	𑀓
7	A		I			O	KIM	KHU	GE	GHE	CHĀ	CHHĀ			
	𑀅		𑀇			𑀊	𑀋	𑀌	𑀍	𑀎	𑀏	𑀐			
8	A	Ā		U			KO		GO		CHO			JI	JĀ
	𑀅	𑀆		𑀈			𑀋		𑀎		𑀏			𑀒	𑀓
9	A	Ā	I	U	E	O	KE	KHĀ	KHU		GHE	CHU	CHA	JĀ	
	𑀅	𑀆	𑀇	𑀈	𑀉	𑀊	𑀋	𑀌	𑀍		𑀎	𑀏	𑀐	𑀒	
10	A	Ā		U	E			KHU	GĀ		CHU	CHHA	JĀ		
	𑀅	𑀆		𑀈	𑀉			𑀌	𑀎		𑀏	𑀑	𑀒	𑀓	
	A				E	O	KO		GA	GHA	CHA	CHHI			
	𑀅				𑀉	𑀊	𑀋		𑀎	𑀏	𑀐	𑀑			

Forms within brackets denote rare examples

1. Kalasi R.E. I-X
2. Kalasi R.E. XI-XIV
3. Delhi Topra P.E. I-VI
4. Delhi Topra P.E. VII
5. Delhi Mirath P.E. I-VII
6. Lauriya-Araraj
Lauriya-Nandangadh
Rampurva

} P.E. I-VII

PLATE IIIa

JHA	ṆA	TA	THI	ḌĀ	ḌHA	NA	TA	THA	DO	DHU	ṆA	1
𑖦		𑖠	𑖡	𑖢	𑖣		𑖤, 𑖥	𑖦	𑖧	𑖨, (𑖩)	𑖪	
JHI		TA	THA	DA	ḌHA		TA TI	THU	DA	DHA	NA	2
𑖦		𑖠	𑖡	𑖢, (𑖣)	𑖣		𑖤, 𑖥	𑖦	𑖧, 𑖨	𑖩	𑖪	
JHI		TE TI	THŪ	ḌU	ḌĪ	ḌHĪ	TI TIM	THI	DIM	DHĪ	NO	3
𑖦		𑖠, 𑖡	𑖢	𑖣, 𑖤	𑖥		𑖦, 𑖧	𑖨	𑖩	𑖪	𑖫	
JHA		TĪ	THA	ḌI	ḌHI	ḌHA	TI	THĀ	DI	DE	DHA	NO
𑖦		𑖠	𑖡	𑖢	𑖣, 𑖤	𑖥	𑖦	𑖧	𑖨, 𑖩	𑖪, 𑖫	𑖬	𑖭
		TE TA	THĀ	ḌI	ḌA	ḌHA	TU TĀ	THE	DE	DHĀ	NO	5
		𑖠, 𑖡	𑖢	𑖣, 𑖤	𑖥		𑖦, 𑖧	𑖨	𑖩	𑖪	𑖫	
JHI		TE	THŪ	ḌU	ḌĪ	ḌHI	TU, TŪ	THA	DA	DIM	DHĪ	NU NO
𑖦		𑖠	𑖢	𑖣, 𑖤	𑖥, 𑖦		𑖦, 𑖧	𑖨	(𑖩), 𑖪	𑖫	𑖬	𑖭, 𑖮
		TE					TI, TĪ	TA	THI	DĀ		NI
		𑖠					𑖦, 𑖧	𑖨	𑖩			𑖫
		TE	THA	ḌA	ḌHI		TA	THA	DE	DHE	NA	8
		𑖠	𑖡	𑖢	𑖣		𑖤	𑖦	𑖧	𑖨	𑖪	
		TA					TA TI	THA	DE	DI	DHĀ	NA
		𑖠, 𑖡					𑖤, 𑖥	𑖦	𑖧, 𑖨	𑖩	𑖪	𑖫
JHI		TI		ḌĀ	ḌHI		TĀ TĪ	THA	DE	DIM	DHAM	NO
𑖦		𑖠		𑖢	𑖣		𑖤, 𑖥	𑖦	𑖧, 𑖨	𑖩	𑖪	𑖫
				ḌI			TIM		DE	DA		NI
				𑖢			𑖤		𑖧, (𑖨)		𑖫	𑖬

7. Sanchi M.P.I.
8. Rummindei } M.P.I.
- Nigali Sagar }
9. Sarnath M.P.I.
10. Allahabad-Kosam P.E. I-VII
11. Allahabad-Kosam M.P.I. }
- Queen's Pillar Inscription }

THE AŚOKAN BRĀHMĪ

	PA	PHA	BA	BHA	MĀ	MO	YA	RA	LE	LA	LA	VA	ŚĀ	SHA
1	𑀧	𑀧	𑀶	𑀭	𑀭, 𑀭	𑀭	𑀭	𑀭	𑀭	𑀭	𑀭	𑀭	𑀭	𑀭
	PA	PHA	BA	BHA	ME	MA	YA		LĀ			VĀ	ŚĀ	SHU SHI
2	𑀧	𑀧	𑀶	𑀭	𑀭, 𑀭	𑀭	𑀭	𑀭	𑀭	𑀭	𑀭	𑀭	𑀭	𑀭
	PI	PHA	BĀ	BHI	ME	YE			LO			VĀ	VĪ	
3	𑀧	𑀧	𑀶	𑀭	𑀭	𑀭	𑀭	𑀭	𑀭	𑀭	𑀭	𑀭	𑀭	𑀭
	PI	PHA	BA	BHO	MA	YO						VĀ		
4	𑀧, (𑀧)	𑀧	𑀶	𑀭	𑀭, 𑀭	𑀭	𑀭	𑀭	𑀭	𑀭	𑀭	𑀭	𑀭	𑀭
	PO		BA	BHA	MO	YE			LA			VĀ	VĪ	
5	𑀧		𑀶	𑀭	𑀭	𑀭	𑀭	𑀭	𑀭	𑀭	𑀭	𑀭	𑀭	𑀭
	PO	PHA	BA	BHO	ME	MA	YA		LĪ			VĪ		
6	𑀧	𑀧	𑀶	𑀭	𑀭, 𑀭	𑀭	𑀭	𑀭	𑀭	𑀭	𑀭	𑀭	𑀭	𑀭
	PU			BHI	ME	MA	YĀ	RI				VĀ		
7	𑀧			𑀭, 𑀭	𑀭, 𑀭	𑀭, 𑀭	𑀭	𑀭	𑀭	𑀭	𑀭	𑀭	𑀭	𑀭
	PI		BU	BHI	ME	YE			LĀ			VĪ		
8	𑀧		𑀶	𑀭	𑀭	𑀭	𑀭	𑀭	𑀭	𑀭	𑀭	𑀭	𑀭	𑀭
	PIH	PHĀ		BHE	MĀ	YE						VĀ		
9	𑀧	𑀧		𑀭	𑀭	𑀭	𑀭	𑀭	𑀭	𑀭	𑀭	𑀭	𑀭	𑀭
	PO	PHA	BA	BHO	MĀ	YA			LO			VĀ		
10	𑀧	𑀧	𑀶	𑀭	𑀭	𑀭	𑀭	𑀭	𑀭	𑀭	𑀭	𑀭	𑀭	𑀭
	PI		BI	BHI	ME	YA			LU			VĀ		
11	𑀧		𑀶	𑀭	𑀭	𑀭	𑀭	𑀭	𑀭	𑀭	𑀭	𑀭	𑀭	𑀭

Forms within brackets are rare examples

1. Kalasi R.E. I-X
2. Kalasi R.E. XI-XIV
3. Delhi Topra P.E. I-VI
4. Delhi Topra P.E. VII
5. Delhi Mirath P.E. I-VII
6. Lauriya-Araraj
Lauriya-Nandangadh
Rampurva

} P.E. I-VII

PLATE IIIb

SA	HĀ	SMĀ	VA	KYĀ	MYĀ	VYĀ	1
SA	HA	HMA	TVĀ	KYA	MYĀ	GYĀ	2
SI	HE		SVA				3
SI	HE			KYĀ		BHYM	4
SI	HI		SVA	KHYA		SYĀ	5
SŪ	HU		SVA	TYĀ	KHYA	DHYĀ	6
SAH	HI						7
SI	HĪ			KYA			8
SA SU	HE		SVA				9
SĪ	HE			KHYA			10
SĀ	HE HA						11

7. Sanchi M.P.I.
8. Rummindei } M.P.I.
- Nigali Sagar }
9. Sarnath M.P.I.
10. Allahabad-Kosam P.E. I-VII
11. Allahabad-Kosam M.P.I. }
 Queen's Pillar inscription }

THE AŚOKAN BRĀHMĪ

	A	Ā	I	U	E	O	KIM	KHU	GA	CHA	CHHI	JĀ
1	ㅏ	ㅑ	ㅓ	ㅕ	ㅗ	ㅛ	ㅗ	ㅛ	ㅕ	ㅗ	ㅛ	ㅗ
	ㅓ	ㅑ	ㅓ	ㅕ	ㅗ	ㅛ	ㅗ	ㅛ	ㅕ	ㅗ	ㅛ	ㅗ
2	ㅓ	ㅑ	ㅓ	ㅕ	ㅗ	ㅛ	ㅗ	ㅛ	ㅕ	ㅗ	ㅛ	ㅗ
	ㅓ	ㅑ	ㅓ	ㅕ	ㅗ	ㅛ	ㅗ	ㅛ	ㅕ	ㅗ	ㅛ	ㅗ
3	ㅓ	ㅑ	ㅓ	ㅕ	ㅗ	ㅛ	ㅗ	ㅛ	ㅕ	ㅗ	ㅛ	ㅗ
	ㅓ	ㅑ	ㅓ	ㅕ	ㅗ	ㅛ	ㅗ	ㅛ	ㅕ	ㅗ	ㅛ	ㅗ
4	ㅓ	ㅑ	ㅓ	ㅕ	ㅗ	ㅛ	ㅗ	ㅛ	ㅕ	ㅗ	ㅛ	ㅗ
	ㅓ	ㅑ	ㅓ	ㅕ	ㅗ	ㅛ	ㅗ	ㅛ	ㅕ	ㅗ	ㅛ	ㅗ
5	ㅓ	ㅑ	ㅓ	ㅕ	ㅗ	ㅛ	ㅗ	ㅛ	ㅕ	ㅗ	ㅛ	ㅗ
	ㅓ	ㅑ	ㅓ	ㅕ	ㅗ	ㅛ	ㅗ	ㅛ	ㅕ	ㅗ	ㅛ	ㅗ
6	ㅓ	ㅑ	ㅓ	ㅕ	ㅗ	ㅛ	ㅗ	ㅛ	ㅕ	ㅗ	ㅛ	ㅗ
	ㅓ	ㅑ	ㅓ	ㅕ	ㅗ	ㅛ	ㅗ	ㅛ	ㅕ	ㅗ	ㅛ	ㅗ
7	ㅓ	ㅑ	ㅓ	ㅕ	ㅗ	ㅛ	ㅗ	ㅛ	ㅕ	ㅗ	ㅛ	ㅗ
	ㅓ	ㅑ	ㅓ	ㅕ	ㅗ	ㅛ	ㅗ	ㅛ	ㅕ	ㅗ	ㅛ	ㅗ
8	ㅓ	ㅑ	ㅓ	ㅕ	ㅗ	ㅛ	ㅗ	ㅛ	ㅕ	ㅗ	ㅛ	ㅗ
	ㅓ	ㅑ	ㅓ	ㅕ	ㅗ	ㅛ	ㅗ	ㅛ	ㅕ	ㅗ	ㅛ	ㅗ
9	ㅓ	ㅑ	ㅓ	ㅕ	ㅗ	ㅛ	ㅗ	ㅛ	ㅕ	ㅗ	ㅛ	ㅗ
	ㅓ	ㅑ	ㅓ	ㅕ	ㅗ	ㅛ	ㅗ	ㅛ	ㅕ	ㅗ	ㅛ	ㅗ
10	ㅓ	ㅑ	ㅓ	ㅕ	ㅗ	ㅛ	ㅗ	ㅛ	ㅕ	ㅗ	ㅛ	ㅗ
	ㅓ	ㅑ	ㅓ	ㅕ	ㅗ	ㅛ	ㅗ	ㅛ	ㅕ	ㅗ	ㅛ	ㅗ
11	ㅓ	ㅑ	ㅓ	ㅕ	ㅗ	ㅛ	ㅗ	ㅛ	ㅕ	ㅗ	ㅛ	ㅗ
	ㅓ	ㅑ	ㅓ	ㅕ	ㅗ	ㅛ	ㅗ	ㅛ	ㅕ	ㅗ	ㅛ	ㅗ
12	ㅓ	ㅑ	ㅓ	ㅕ	ㅗ	ㅛ	ㅗ	ㅛ	ㅕ	ㅗ	ㅛ	ㅗ
	ㅓ	ㅑ	ㅓ	ㅕ	ㅗ	ㅛ	ㅗ	ㅛ	ㅕ	ㅗ	ㅛ	ㅗ

Forms within brackets are rare examples

1. Dhauli and Jaugad R.E.
2. Dhauli and Jaugad S.E.
3. Girnar R.E.
4. Sopara R.E.
5. Erragudi R.E.
6. Erragudi and Rajula Mandagiri M.R.I.

PLATE IVa

JHA	ṆĀ	ṬĀ	ṬHI	ḌĀ	ḌHI	ḌHA	ṆĀ	TU	TŪ	THI	DU	DO	DHU	NO	
𑂔	-	𑂔	𑂔	𑂔	𑂔	𑂔	-	𑂔	𑂔	𑂔	𑂔	𑂔	𑂔	𑂔	1
JHA	ṆĀ	ṬI	ṬHĀ				ṆĀ	TO	TA	THĀ	ḌĀ	ḌHA	NO		
𑂔	𑂔	𑂔	𑂔				𑂔	𑂔	𑂔	𑂔	𑂔	𑂔	𑂔	𑂔	2
JHA	ṆĀ	ṬI		ḌĀ	ḌĀ	ḌHĪ	ṆĀ	ṬI	TA	THAI	ḌĀ	ḌĀ	ḌHĀ	NO	
𑂔	𑂔	𑂔		𑂔	𑂔	𑂔	𑂔	𑂔	𑂔	𑂔	𑂔	𑂔	𑂔	𑂔	3
		ṬI	ṬHĀ					TA	THĀ	ḌĀ	ḌHĀ	NI			
		𑂔	𑂔					𑂔	𑂔	𑂔	𑂔	𑂔	𑂔	𑂔	4
		ṬĀ	ṬHĀ	ḌE	ḌHA			TA	TŪ	THI	ḌI	ḌHI	NU	NO	
		𑂔	𑂔	𑂔	𑂔			𑂔	𑂔	𑂔	𑂔	𑂔	𑂔	𑂔	5
JHA			ṬHĀ		ḌHA			TA	TE	THĀ	ḌE	ḌĀ	ḌHĀ	NI	
𑂔			𑂔		𑂔			𑂔	𑂔	𑂔	𑂔	𑂔	𑂔	𑂔	6
	ṆĀ	ṬI	ṬHĀ	ḌE	ḌHI	ṆĀ		TE	THE	ḌE	ḌHI	NO			
	𑂔	𑂔	𑂔	𑂔	𑂔	𑂔	𑂔	𑂔	𑂔	𑂔	𑂔	𑂔	𑂔	𑂔	7
			ṬHĀ		ḌHA			TE	TĀ		ḌE	ḌHI	NA		
			𑂔		𑂔			𑂔	𑂔		𑂔	𑂔	𑂔	𑂔	8
	TA	THE	THĀ	ḌĀ	ḌHI	ḌHA		ṬI			ḌE	ḌHA	NO		
	𑂔	𑂔	𑂔	𑂔	𑂔	𑂔		𑂔			𑂔	𑂔	𑂔	𑂔	9
				ḌĀ	ḌHI			ṬI	TA	THĀ	ḌĀ	ḌHI	ṆĀ		
				𑂔	𑂔			𑂔	𑂔	𑂔	𑂔	𑂔	𑂔	𑂔	10
	ṬĀ	ṬHĀ	ḌĀ	ḌHA	ṆĒ	ṬI	TA				ḌĀ	ḌHA	NO		
	𑂔	𑂔	𑂔	𑂔	𑂔	𑂔	𑂔				𑂔	𑂔	𑂔	𑂔	11
	ṬĀ	ṬHĀ	ḌĀ	ḌHA		TA	THE	ḌE	ḌHI	NĀM					
	𑂔	𑂔	𑂔	𑂔		𑂔	𑂔	𑂔	𑂔	𑂔	𑂔	𑂔	𑂔	𑂔	12

7. Brahmagiri, Siddhapur, and Jating Rameshvar M.R.I.
8. Maski M.R.I.
9. Rupnath M.R.I.
10. Bairat and Calcutta-Bairat slab M.R.I.
11. Gujarra M.R.I.
12. Sahasram and Barabar Hill cave inscriptions

THE AŚOKAN BRĀHMĪ

	PĪ	PHA	BO	BHI	MĀ	MO	YO	YE	RA	LĀ	LA	VŪ	SA	SHA
1	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧
2	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧
3	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧
4	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧
5	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧
6	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧
7	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧
8	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧
9	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧
10	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧
11	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧
12	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧

Forms within brackets are rare examples

1. Dhauli and Jaugad R.E.
2. Dhauli and Jaugad S.E.
3. Girnar R.E.
4. Sopara R.E.
5. Erragudi R.E.
6. Erragudi and Rajula Mandagiri M.R.I.

PLATE IVb

SI	SU	HŪ	HO		SVA	TVĀ						MYĀ	1			
ṣ	ṣ	ḥ	(ṣ)		ṣ	ṣ						ṣ				
SA	HA				SVA	HVE			SYE	KHYA	VYE	NYE	2			
ṣ	ṣ	(ṣ)			ṣ	ṣ			ṣ	ṣ	ṣ	ṣ				
SA	HA	MHI	DVĀ	DVO	SVA	VYA*	STI	PTĀ	TSĀ*	SRA	OSA	KRĀ	PEĀ	SPA	MYA	3
ṣ	(ṣ)	ṣ	ṣ	ṣ	ṣ	ṣ	ṣ	ṣ	ṣ	ṣ	ṣ	ṣ	ṣ	ṣ	ṣ	
SA	HA															4
ṣ	ṣ															
SA	SI	HO	HA													5
ṣ	(ṣ)	ṣ	ṣ													
SA	SI	HA	HE		SVA	VYA	PTE			PRĀ						6
ṣ	ṣ	ṣ	ṣ		ṣ	ṣ	ṣ			ṣ						
SU	HĀ	HĪ			SVA	VYŪ	PTE			DRA	HYI	KYE				7
ṣ	ṣ	ṣ			ṣ	ṣ	ṣ			ṣ	ṣ	ṣ				
SO	SĀ	HE														8
ṣ	ṣ	ṣ														
SĀ	HE				SVA	VYU										9
ṣ	ṣ				ṣ	ṣ										
SĀ	HE				SVA					PRĪ	CHYA	KYE				10
ṣ	ṣ				ṣ					ṣ	ṣ	ṣ				
SO	HĀ				SVA											11
ṣ	ṣ				ṣ											
SA	HA															12
ṣ	ṣ															

* These conjuncts are read by others as Vya, Tpā and Sṭa

7. Brahmagiri, Siddhapur and Jating Rameshvar M.R.I.
8. Maski M.R.I.
9. Rupnath M.R.I.
10. Bairat and Calcutta-Bairat slab M.R.I.
11. Gujarrā M.R.I.
12. Sahasram and Barabar Hill cave inscriptions

NORTH INDIA

	A	Ā	I	U	E	O	KU	KHA	GO	GHA	CHA	CHHA	JĪ
1	𑀓 . 𑀓		-	-			𑀓	-	𑀓		𑀓	-	𑀓
2	𑀓				𑀓		𑀓 . 𑀓	𑀓	𑀓 . 𑀓				
3	𑀓				𑀓		𑀓	𑀓	𑀓				
4	𑀓				𑀓		𑀓		𑀓		𑀓 . 𑀓		
5			𑀓				𑀓		𑀓				
6							𑀓		𑀓		𑀓		
7	𑀓 . 𑀓		𑀓	𑀓		𑀓	𑀓		𑀓		𑀓 . 𑀓		𑀓 . 𑀓
8	𑀓						𑀓		𑀓				𑀓
9									𑀓 . 𑀓				𑀓
10	𑀓				𑀓		𑀓	𑀓	𑀓 . 𑀓				𑀓 . 𑀓
11	𑀓			𑀓					𑀓 . 𑀓	𑀓			𑀓 . 𑀓
12	𑀓 . 𑀓		𑀓			𑀓	𑀓	𑀓	𑀓	𑀓			𑀓 . 𑀓

* This type of 'JA' is found only once

1. Nagarjuni cave inscriptions of Daśaratha, close of the 3rd century B.C.
2. Mahasthan inscription, 2nd century B.C.
3. Ramgadh cave inscriptions, 2nd century B.C.
4. Sohgaure copper plate, 2nd century B.C.
5. Piprahwa vase inscription, 2nd century B.C.
6. Barli fragmentary inscription, 1st century B.C.

PLATE Va

JA	NA	TA	THE	THI	DA	DHA	NA	TE	THE	DE	DI	DHA	NA	1
			○	○	ʃ	-		λ	○	ʃ	ʃ		1	
			THA	DA				TI		DA	DHA	NI		
			○	ʃ				λ	-	ʃ	ʃ	ʃ	2	
								TI	THA	DI	DE	NH		
								λ	○	ʃ	ʃ	ʃ	3	
			THA	DA				TI	THU	DA		NI		
			○	ʃ				λ	○	ʃ	ʃ	ʃ	4	
								TI		DA	DHA	NI		
								λ	-	ʃ	ʃ	ʃ	5	
THI								TU	TA			NI		
ʃ								λ	λ	-		ʃ	ʃ	6
	NA		THI	DA			NA	TA		DO	DI	DHA	NI	
	h		○	ʃ			I	λ	λ	ʃ	ʃ	ʃ	ʃ	7
		TE					NA			ʃ	ʃ	DHA	NE	
		ʃ					I			ʃ	ʃ	ʃ	ʃ	8
					DA			TA	TO		DA		NA	
					ʃ			h	λ		ʃ		ʃ	9
					DA			TA	THU	DO	DHA	NE		
					ʃ			h	h	ʃ	ʃ	ʃ	ʃ	10
NA	TA	THA			DHA		TA	TI		DA	DE	DHE	THA	
h	ʃ	○			ʃ		λ	λ		ʃ	ʃ	ʃ	ʃ	11
NO					DA		NI	TI		DA	DHA	NI		
ʃ					ʃ		I	λ		ʃ	ʃ	ʃ	ʃ	12

7. Besnagar pillar inscription of Heliodorus, close of the 2nd century B.C.
8. Ghosundi stone inscription, 1st century B.C.
9. Bhilsa inscription of Bhāgavata, 1st century B.C.
10. Coin series No. I, 2nd century B.C.
11. Coin series No. II, 1st century B.C.
12. Coin series No. III, 1st century A.D.

NORTH INDIA

	PI	PHA	BA	BHI	BHA	MA	YA	RA	LI	LA	VA	VI	SA	SHA
1	𑀧			𑀢, 𑀣		𑀡	𑀓, 𑀔		𑀦		𑀭, 𑀮			
	PU					MĀ	YI		LE		VA			
2	𑀧	-				𑀡	𑀓		𑀦		𑀭			
	PA		BA	BHŪ		MA	YO	RA	RU	LE	LA		SA	
3	𑀧	-	𑀢	𑀢		𑀡	𑀓	𑀓	𑀦	𑀦	𑀭		𑀮	
	PŪ			BHA		MĀ	YI			LA	VA			
4	-	-	-	𑀢		𑀡	𑀓		𑀦		𑀭			
	PU		BU	BHA			YA			LI	VA			
5	𑀧	-	𑀢	𑀢			𑀓		𑀦		𑀭			
				BHA		MA	YE	RĀ	LI		VA			
6	-	-	-	𑀢		𑀡	𑀓	𑀓	𑀦, 𑀦		𑀭			
	PU			BHĀ		MĀ	YA	YO	RĀ	RĀ	LI	LĀ		
7	𑀧	-		𑀢		𑀡	𑀓, 𑀓	𑀓, 𑀓	𑀦, 𑀦	𑀦, 𑀦	𑀭, 𑀭		𑀮, 𑀮	
	PŪ			BHA		ME	YA		RĀ		LĀ		SA	
8	𑀧	-		𑀢		𑀡	𑀓	𑀓	𑀦	𑀦	𑀭		𑀮, 𑀮	𑀮
	PU			BHA		MA					VA			
9	𑀧	-		𑀢		𑀡					𑀭			
	PĀ	PA				MĀ	MA	YA	YO	RA	LA		VA	
10	𑀧, 𑀧	-	-	-		𑀡, 𑀡	𑀓, 𑀓	𑀓	𑀦	𑀦	𑀭		𑀮	
	PU		BA	BHU		MA	YĀ	YO	RĀ	LA	VI		SA	SHA
11	𑀧	-	𑀢	𑀢		𑀡	𑀓, 𑀓	𑀓	𑀦	𑀦	𑀭		𑀮	𑀮
	PĀ	PHA	BA	BHA		MA	MI	YA	RĀ	RI	LA		VI	SA
12	𑀧	𑀧	𑀢	𑀢		𑀡, 𑀡	𑀓	𑀓, 𑀓	𑀦	𑀦	𑀭		𑀮	𑀮

1. Nagarjuni cave inscriptions of Daśaratha, close of the 3rd century B.C.
2. Mahasthan inscription, 2nd century B.C.
3. Ramgadh cave inscriptions, 2nd century B.C.
4. Sohgaure copper plate, 2nd century B.C.
5. Piprahwa vase inscription, 2nd century B.C.
6. Barli fragmentary inscription, 1st century B.C.

NORTH INDIA AND DECCAN

1	𑀅, 𑀆 𑀇, 𑀈 𑀉, 𑀊	𑀋, 𑀌 𑀍, 𑀎 𑀏, 𑀐	𑀑, 𑀒 𑀓, 𑀔 𑀕, 𑀖	𑀗, 𑀘 𑀙, 𑀚 𑀛, 𑀜	𑀝, 𑀞 𑀟, 𑀠 𑀡, 𑀢	𑀣, 𑀤 𑀥, 𑀦 𑀧, 𑀨	KO 𑀩, 𑀪 𑀫, 𑀬	KI 𑀭, 𑀮 𑀯, 𑀰	KHI 𑀱, 𑀲 𑀳, 𑀴	GA 𑀵, 𑀶 𑀷, 𑀸	GO 𑀹, 𑀺 𑀻, 𑀼	CHĀ 𑀽, 𑀾 𑀿, 𑁀	CHO 𑁁, 𑁂 𑁃, 𑁄	CHA 𑁅, 𑁆 𑁇, 𑁈	CHHI 𑁉, 𑁊 𑁋, 𑁌	CHHĪ 𑁍, 𑁎 𑁏, 𑁐	JA 𑁑, 𑁒 𑁓, 𑁔	JĪ 𑁕, 𑁖 𑁗, 𑁘
2	𑀅, 𑀆 𑀇, 𑀈 𑀉, 𑀊	𑀋, 𑀌 𑀍, 𑀎 𑀏, 𑀐	𑀑, 𑀒 𑀓, 𑀔 𑀕, 𑀖	𑀗, 𑀘 𑀙, 𑀚 𑀛, 𑀜	𑀝, 𑀞 𑀟, 𑀠 𑀡, 𑀢	𑀣, 𑀤 𑀥, 𑀦 𑀧, 𑀨	KA 𑀩, 𑀪 𑀫, 𑀬	KĀ 𑀭, 𑀮 𑀯, 𑀰	KHA 𑀱, 𑀲 𑀳, 𑀴	KHI 𑀵, 𑀶 𑀷, 𑀸	GA 𑀹, 𑀺 𑀻, 𑀼	GO 𑀽, 𑀾 𑀿, 𑁀	GHA 𑁁, 𑁂 𑁃, 𑁄	CHA 𑁅, 𑁆 𑁇, 𑁈	CHHU 𑁉, 𑁊 𑁋, 𑁌	JA 𑁍, 𑁎 𑁏, 𑁐	JĪ 𑁑, 𑁒 𑁓, 𑁔	
3	𑀅, 𑀆 𑀇, 𑀈 𑀉, 𑀊	𑀋, 𑀌 𑀍, 𑀎 𑀏, 𑀐	𑀑, 𑀒 𑀓, 𑀔 𑀕, 𑀖	𑀗, 𑀘 𑀙, 𑀚 𑀛, 𑀜	𑀝, 𑀞 𑀟, 𑀠 𑀡, 𑀢	𑀣, 𑀤 𑀥, 𑀦 𑀧, 𑀨	KO 𑀩, 𑀪 𑀫, 𑀬	KĀ 𑀭, 𑀮 𑀯, 𑀰	GA 𑀱, 𑀲 𑀳, 𑀴	GO 𑀵, 𑀶 𑀷, 𑀸	CHA 𑀹, 𑀺 𑀻, 𑀼	CHHI 𑀽, 𑀾 𑀿, 𑁀	CHHĀ 𑁁, 𑁂 𑁃, 𑁄	JA 𑁅, 𑁆 𑁇, 𑁈	JĪ 𑁉, 𑁊 𑁋, 𑁌			
4	𑀅, 𑀆 𑀇, 𑀈 𑀉, 𑀊	𑀋, 𑀌 𑀍, 𑀎 𑀏, 𑀐	𑀑, 𑀒 𑀓, 𑀔 𑀕, 𑀖	𑀗, 𑀘 𑀙, 𑀚 𑀛, 𑀜	𑀝, 𑀞 𑀟, 𑀠 𑀡, 𑀢	𑀣, 𑀤 𑀥, 𑀦 𑀧, 𑀨	KA 𑀩, 𑀪 𑀫, 𑀬	GA 𑀭, 𑀮 𑀯, 𑀰	GHO 𑀱, 𑀲 𑀳, 𑀴	CHA 𑀵, 𑀶 𑀷, 𑀸	CHHA 𑀹, 𑀺 𑀻, 𑀼	JA 𑀽, 𑀾 𑀿, 𑁀	JĪ 𑁁, 𑁂 𑁃, 𑁄					
5	𑀅, 𑀆 𑀇, 𑀈 𑀉, 𑀊	𑀋, 𑀌 𑀍, 𑀎 𑀏, 𑀐	𑀑, 𑀒 𑀓, 𑀔 𑀕, 𑀖	𑀗, 𑀘 𑀙, 𑀚 𑀛, 𑀜	𑀝, 𑀞 𑀟, 𑀠 𑀡, 𑀢	𑀣, 𑀤 𑀥, 𑀦 𑀧, 𑀨	KO 𑀩, 𑀪 𑀫, 𑀬	KĀU 𑀭, 𑀮 𑀯, 𑀰	GO 𑀱, 𑀲 𑀳, 𑀴	CHHA 𑀹, 𑀺 𑀻, 𑀼	JĪ 𑀽, 𑀾 𑀿, 𑁀							
6	𑀅, 𑀆 𑀇, 𑀈 𑀉, 𑀊	𑀋, 𑀌 𑀍, 𑀎 𑀏, 𑀐	𑀑, 𑀒 𑀓, 𑀔 𑀕, 𑀖	𑀗, 𑀘 𑀙, 𑀚 𑀛, 𑀜	𑀝, 𑀞 𑀟, 𑀠 𑀡, 𑀢	𑀣, 𑀤 𑀥, 𑀦 𑀧, 𑀨	KO 𑀩, 𑀪 𑀫, 𑀬	KI 𑀭, 𑀮 𑀯, 𑀰	KHI 𑀱, 𑀲 𑀳, 𑀴	CĀ 𑀵, 𑀶 𑀷, 𑀸	GU 𑀹, 𑀺 𑀻, 𑀼	CHĀ 𑀽, 𑀾 𑀿, 𑁀	CHU 𑁁, 𑁂 𑁃, 𑁄	CHA 𑁅, 𑁆 𑁇, 𑁈	CHHA 𑁉, 𑁊 𑁋, 𑁌	JĀ 𑁍, 𑁎 𑁏, 𑁐	JĒ 𑁑, 𑁒 𑁓, 𑁔	
7	𑀅, 𑀆 𑀇, 𑀈 𑀉, 𑀊	𑀋, 𑀌 𑀍, 𑀎 𑀏, 𑀐	𑀑, 𑀒 𑀓, 𑀔 𑀕, 𑀖	𑀗, 𑀘 𑀙, 𑀚 𑀛, 𑀜	𑀝, 𑀞 𑀟, 𑀠 𑀡, 𑀢	𑀣, 𑀤 𑀥, 𑀦 𑀧, 𑀨	KA 𑀩, 𑀪 𑀫, 𑀬	GO 𑀭, 𑀮 𑀯, 𑀰	GĪ 𑀱, 𑀲 𑀳, 𑀴	CHA 𑀵, 𑀶 𑀷, 𑀸	CHHI 𑀹, 𑀺 𑀻, 𑀼	JĒ 𑀽, 𑀾 𑀿, 𑁀						
8	𑀅, 𑀆 𑀇, 𑀈 𑀉, 𑀊	𑀋, 𑀌 𑀍, 𑀎 𑀏, 𑀐	𑀑, 𑀒 𑀓, 𑀔 𑀕, 𑀖	𑀗, 𑀘 𑀙, 𑀚 𑀛, 𑀜	𑀝, 𑀞 𑀟, 𑀠 𑀡, 𑀢	𑀣, 𑀤 𑀥, 𑀦 𑀧, 𑀨	KA 𑀩, 𑀪 𑀫, 𑀬	KU 𑀭, 𑀮 𑀯, 𑀰	KHI 𑀱, 𑀲 𑀳, 𑀴	GA 𑀵, 𑀶 𑀷, 𑀸	GI 𑀹, 𑀺 𑀻, 𑀼	GHA 𑀽, 𑀾 𑀿, 𑁀	CHE 𑁁, 𑁂 𑁃, 𑁄	CHHA 𑁅, 𑁆 𑁇, 𑁈	JĀ 𑁉, 𑁊 𑁋, 𑁌	JĪ 𑁍, 𑁎 𑁏, 𑁐		
9	𑀅, 𑀆 𑀇, 𑀈 𑀉, 𑀊	𑀋, 𑀌 𑀍, 𑀎 𑀏, 𑀐	𑀑, 𑀒 𑀓, 𑀔 𑀕, 𑀖	𑀗, 𑀘 𑀙, 𑀚 𑀛, 𑀜	𑀝, 𑀞 𑀟, 𑀠 𑀡, 𑀢	𑀣, 𑀤 𑀥, 𑀦 𑀧, 𑀨	KĀ 𑀩, 𑀪 𑀫, 𑀬	KĪ 𑀭, 𑀮 𑀯, 𑀰	KHI 𑀱, 𑀲 𑀳, 𑀴	KHA 𑀵, 𑀶 𑀷, 𑀸	GĀ 𑀹, 𑀺 𑀻, 𑀼	GI 𑀽, 𑀾 𑀿, 𑁀	GHA 𑁁, 𑁂 𑁃, 𑁄	CHE 𑁅, 𑁆 𑁇, 𑁈	CHŪ 𑁉, 𑁊 𑁋, 𑁌	CHHI 𑁍, 𑁎 𑁏, 𑁐	JA 𑁑, 𑁒 𑁓, 𑁔	JĪ 𑁕, 𑁖 𑁗, 𑁘
10	𑀅, 𑀆 𑀇, 𑀈 𑀉, 𑀊	𑀋, 𑀌 𑀍, 𑀎 𑀏, 𑀐	𑀑, 𑀒 𑀓, 𑀔 𑀕, 𑀖	𑀗, 𑀘 𑀙, 𑀚 𑀛, 𑀜	𑀝, 𑀞 𑀟, 𑀠 𑀡, 𑀢	𑀣, 𑀤 𑀥, 𑀦 𑀧, 𑀨	KĀ 𑀩, 𑀪 𑀫, 𑀬	KO 𑀭, 𑀮 𑀯, 𑀰	KHI 𑀱, 𑀲 𑀳, 𑀴	KHA 𑀵, 𑀶 𑀷, 𑀸	GĀ 𑀹, 𑀺 𑀻, 𑀼	GI 𑀽, 𑀾 𑀿, 𑁀	CHA 𑁁, 𑁂 𑁃, 𑁄	CHHA 𑁅, 𑁆 𑁇, 𑁈	JA 𑁉, 𑁊 𑁋, 𑁌	E 𑀕, 𑀖 𑀗, 𑀘		
11																		
12																		

1. Inscriptions of the Mathura Kshatrapas, early 1st century A.D.
2. Sanchi series No. I, early 1st century B.C.
3. Sanchi series No. II, late 1st century B.C.
4. Sanchi series No. III, early 1st century A.D.
5. Inscriptions from Pabhosa and Ayodhya, early 1st century A.D.
6. Bharhut series No. I, late 1st century B.C.

PLATE VIa

JHA	NA	TE TO	THA	DA	DHA	NI	TO TI	THA	DO	DI	DHA	NI	1
		⌒ . ⌒	⊙	⌒ . ⌒		⌒	⌒ . ⌒	⊙	⌒ . ⌒	⌒	⊙	⌒	
JHA	NA NU	TI	THI	DI	DHA	NI	TO TA	THA	DA	DA	DHA	NO NA	2
⌒	⌒ . ⌒	⌒	⊙	⌒	⊙	⌒	⌒ . ⌒	⊙	⌒ . ⌒	⌒	⊙	⌒ . ⌒	
			THI	DI	DHA		TI TA		DA	DHA	NO		3
			⊙	⌒	⊙		⌒ . ⌒		⌒ . ⌒	⊙	⌒		
	NO		THI	DA		NI	TA	THA	DA	DHA	NO		4
	⌒		⊙	⌒		⌒	⌒ . ⌒	⊙	⌒	⊙	⌒		
	NO				DHA	NI	TI		DA	DHI	NA NAH		5
	⌒				⊙	⌒	⌒		⌒	⌒	⌒ . ⌒		
JHA	NA	TI TU		DI DO			TO TU	THI	DI	DE	DHO	NO NI	6
⌒	⌒	⌒ . ⌒		⌒ . ⌒			⌒ . ⌒	⊙	⌒ . ⌒	⌒	⌒	⌒ . ⌒	
	NO					NA	TI		DE	DHA	NA		7
	⌒					⌒	⌒		⌒	⊙	⌒ . ⌒		
		TA					TI		DA	DHI	NA		8
		⌒					⌒		⌒ . ⌒	⌒	⌒		
	TA	THI	DU		NA	TO TI	THI	DO DI	DHO DHI	NO NI		9	
	⌒	⊙	⌒		⌒	⌒ . ⌒	⊙	⌒ . ⌒	⌒ . ⌒	⌒ . ⌒	⌒ . ⌒		
NO	TO TA	THO THI				TO TI	THO THI	DA	DHŪ	NO		10	
⌒	⌒ . ⌒	⊙ . ⊙				⌒ . ⌒	⊙ . ⊙	⌒ . ⌒	⊙	⌒ . ⌒			
NO		THI				TA		DI		NI		11	
⌒		⊙				⌒		⌒		⌒			
					NA	TE		DA	DHA	NA		12	
					⌒	⌒		⌒	⊙	⌒			

7. Bharhut series No. II, early 1st century A.D.
8. Bodhgaya railing inscriptions, early 1st century A.D.
9. Hathigumpha inscription of Khāravela, early 1st century A.D.
10. Nanaghat inscription of Nayanikā, early 1st century A.D.
11. Nanaghat inscription No's 3-8, early 1st century A.D.
12. Nasik inscription No's 1-2, early 1st century A.D.

NORTH INDIA AND DECCAN

1	PU DO PHA	BA	BHĀ MA MI	YA	RI	LA	VA VI	SHA
2	PO PHĪ	BU BŪ BHO BHĪ	MĀ MŪ	YĀ	RI	LA	VA VI	
3	PU PHĪ		BHŪ MA	YĀ	RI	LA	VA VI	
4	PU PHĀ	BA BHA	MI YĀ YĀ	RI RI	LI	VAI	SŌ	SHA
5	PU	BO BU BHO BHĀ	MĀ MI	YĀ	RI RI	LA LI	VA VI	
6	PU PAU		BHŪ MA	RA RI	LĀ	VA VI		
7	PU	BO	MO MI	RI	RA	VA		
8	PU PO	PHĪ	BI BU BHI BHO	MA YO YĀ	RI RO	LI	VA VI	
9	PHĪ	PHĀ	BE BHI BHĀ	YO MĀ YO YU	RI	LO	VA	
10				MA MA YĀ YĀ	RI RO		VI VA	
11								
12								

1. Inscriptions of the Mathura Kshatrapas, early 1st century A.D.
2. Sanchi series No. I, early 1st century B.C.
3. Sanchi series No. II, late 1st century B.C.
4. Sanchi series No. III, early 1st century A.D.
5. Inscriptions from Pabhosa and Ayodhya, early 1st century A.D.
6. Bharhut series No. I, late 1st century B.C.

PLATE VIb

SI	HA	HE	SHNE	TRA	THI	BRA	DRA	NTA	KMA	SVA	ISA	SHA	SHHA	KSHA	SHRA	TRA	THA	HMA	KYA	SYA	1
SA	SU	HA	HA	NHA	NHI	DRA				SVA											2
																					3
SI	HI			TRA																	4
SA	HI	JNĀ	TRA	TIRA		RMA	SVA	DVI	SHI	II	SSA	LGU		SHYA	SYA						5
SU	SA	HU		KRA	BRA	DRA								MHA							6
SU	SI																				7
SĀ			TRĀ	DRĀ																	8
SA	SO	HI	HA																		9
SA	SU	HĀ	HA			PHA	TRA	BKA	VKA					MHA							10
						TKA															11
																					12

7. Bharhut series No. II, early 1st century A.D.
8. Bodhgaya railing inscriptions, early 1st century A.D.
9. Hathigumpha inscription of Khāravela, early 1st century A.D.
10. Nanaghat inscription of Nayanikā, early 1st century A.D.
11. Nanaghat inscription No's 3-8, early 1st century A.D.
12. Nasik inscription No's 1-2, early 1st century A.D.

DECCAN AND SOUTH INDIA

	A	I	U	E	O	KA	KHA	GE	GHA	CHA	CHHA	JA
1	-	-	-	-	-	-	-	Λ	-	-	-	-
2	A	-	-	-	-	KI KE	-	GI	GHA	-	CHHI	JA
3	-	-	U	-	-	KA KU KO	KHA	-	GHA	-	-	JA
4	A	-	U	-	-	KA KU KHI KHA GĀ GO	-	GHA	CHI	-	-	JA
5	A Ā	-	-	-	-	KA KĀ	-	GA GI	-	CHU	-	-
6	A Ā I OR Ī	-	U Ū	-	O	KĀ KO KHA KHĀ GĀ GO	-	GHA GHĀ CHA CHĀ CHHĀ CHHO JĀ JĪ	-	-	-	-
7	A	-	U	-	-	KA KU KO	-	-	-	CHA	-	-
8	A	-	-	E	-	KA	-	-	-	-	-	-
9	A Ā I OR Ī	-	-	Ē	-	KO	-	-	-	CHE	-	-
10	A I OR Ī	-	-	E	O	KĀ KU	-	-	-	CHI	-	-
11	A Ā I OR Ī	-	-	-	-	KO KA	-	-	-	CHI	-	-
12	-	-	-	-	-	-	KHA	-	-	-	-	-

WESTERN DECCAN

1. Bhaja inscription No. 1
2. Inscriptions of Bhaja No's 2-6, Kondane and Pitalkhora
3. Ajanta inscription No's 1-2

EASTERN DECCAN

4. Early inscriptions from Amaravati
5. Inscription on Bhattiprolu crystal
6. Inscriptions on Bhattiprolu caskets

PLATE VIIa

SH	NA	TA	THA	DA	DHA	NA	TA	THA	DĀ	DŌ	DHA	NĀ		
				𑌵	-		h		𑌶, 𑌷	𑌸	𑌹	𑌺	1	
		THĀ				NA	TO. TĀ	THE	DI	DĀ	DHA	DHI	NĀ	NA
		𑌶				I	𑌶, 𑌷	𑌸	𑌶, 𑌷	𑌸	𑌹	𑌺	𑌻	𑌼
		TA	THI	THĀ	DA	NA	𑌶, 𑌷		DA	DĀ	DHA	NO	NA	
		𑌶	𑌷	𑌸	𑌹	I	𑌶		𑌶, 𑌷	𑌸	𑌹	𑌺	𑌻	𑌼
NA	TĀ	TA		DA	DĀ		TA	THA	DE	DŪ	DHA	NI		
h	𑌶	𑌷		𑌹	𑌺		𑌶	h	𑌶	𑌷	𑌸	𑌹	𑌺	𑌻
		THI				NA	TU		DE	DĀ		NA		
		𑌷				I, 𑌶	𑌶		𑌶, 𑌷			𑌶	𑌷	𑌸
NA	TO	THO	THI	DA		NĪ	NO	TO	TE	THO	DĀ	DŌ	DHA	NI
h, 𑌶	𑌶	𑌷	𑌸	𑌹		𑌶, 𑌷	𑌶, 𑌷	𑌶, 𑌷	𑌶, 𑌷	𑌶	𑌶, 𑌷	𑌸	𑌹	𑌺
		TĪ					𑌶, 𑌷						NA	
		𑌶					𑌶, 𑌷						𑌶	𑌷
		THU				NI	TĪ					NE	NA	
		𑌶				I	𑌶					𑌶	𑌷	𑌸
NA	TU						TA					NA		
h	𑌶						𑌶					𑌶	𑌷	𑌸
		TĪ	TU	THI			TĀ					NA	NA	
		𑌶	𑌷	𑌸			𑌶					𑌶	𑌷	𑌸
							TA	TI				NI	NA	
							𑌶	𑌷				𑌶	𑌷	𑌸
							TA (OTRA?)							
							h							12

SOUTH INDIA

- | | |
|---|---------------------------|
| 7. Inscriptions from Kongarpuliyangulam | } all in 1st century A.D. |
| 8. Inscriptions from Alagarmalai, Mettuppatti and Karungalakudi | |
| 9. Inscriptions from Arittapatti and Tirupparangunram | |
| 10. Inscription No. (a) from Sittannavasal | |
| 11. Arikamedu Tamil inscriptions (group I) | |
| 12. Arikamedu Sanskrit inscription (group II) | |

DECCAN AND SOUTH INDIA

	PA	PHA	BA	BHO	BHĀ	MA	YA	RA	LA	LA	VA	SA	SHA				
1	८			ॢ.ॢ		ॣ	ॡ.				१.२						
	PI	PU	BO	BHA	BHO	MA	YA	RI	RĀ	LA	VE	VĀ					
2	ॢ.ॣ		ॢ	ॢ.ॢ	ॣ.ॣ		ॡ.ॡ	ॢ.ॢ	ॣ.ॣ	ॣ.ॣ	ॢ.ॣ						
	PA	PU				MU	MA	YA	KA		VA						
3	ॣ.ॣ					ॣ.ॣ	ॣ	ॡ			ॣ						
	PĀ	PĪ	BA	BHO	MĀ	MU	YĀ	YĀ	RĀ	LA	LE	VA					
4	ॣ.ॣ	ॣ	ॢ.ॢ	ॢ.ॢ	ॣ.ॣ	ॣ.ॣ	ॣ.ॣ	ॣ.ॣ	ॣ.ॣ	ॣ.ॣ		ॣ					
	PU	PU				MA	YA	YĀ	RĀ	KE	LA	VA	SĀ				
5	ॣ					ॣ.ॣ	ॣ.ॣ	ॣ.ॣ	ॣ.ॣ	ॣ.ॣ		ॣ	ॢ				
	PĀ	PU	PHĀ	BO	BŪ	BHE	BHO	MA	YĀ	KU	KĀ	LO	LĪ	VA	VĪ	BHA	
6	ॣ.ॣ	ॣ	ॢ	ॢ.ॣ	ॣ.ॣ	ॣ.ॣ	ॣ.ॣ	ॣ.ॣ	ॣ.ॣ	ॣ.ॣ	ॣ.ॣ	ॣ.ॣ	ॣ.ॣ	ॣ.ॣ	ॣ.ॣ	ॣ.ॣ	f
	PO	PI							RA	RU	LA	VA					
7	ॣ							ॣ.ॣ	ॣ.ॣ	ॣ.ॣ		ॣ					
	PĀ					MA	YA	RŪ	LĀ	LĀ	LĪ	VĀ	VĪ				
8	ॣ					ॣ	ॣ.ॣ	ॣ	ॣ	ॣ.ॣ	ॣ.ॣ	ॣ.ॣ	ॣ.ॣ	ॣ.ॣ	ॣ.ॣ	ॣ.ॣ	
	PO					MA	YA	RU	LĀ	LĀ	LĀ	VA	VA	VA	VA	VA	
9	ॣ					ॣ	ॣ.ॣ	ॣ	ॣ	ॣ.ॣ	ॣ.ॣ	ॣ.ॣ	ॣ.ॣ	ॣ.ॣ	ॣ.ॣ	ॣ.ॣ	
	PO	PĪ				MI	YA	RA	RĀ	LA	LĀ						
10	ॣ.ॣ	ॣ				ॣ	ॡ	ॣ.ॣ	ॣ.ॣ	ॣ.ॣ	ॣ.ॣ						
	PĪ					MA	YA	RA	LA	LĀ	LĀ	VA	VĪ				
11	ॣ					ॣ	ॡ	ॣ	ॣ	ॣ.ॣ	ॣ.ॣ	ॣ.ॣ	ॣ.ॣ	ॣ.ॣ	ॣ.ॣ	ॣ.ॣ	
						MI	YA										
12						ॣ	ॡ										

WESTERN DECCAN

1. Bhaja inscription No. 1
2. Inscriptions of Bhaja No's 2-6, Kondane and Pitalkhora
3. Ajanta inscription No's 1-2

EASTERN DECCAN

4. Early inscriptions from Amaravati
5. Inscription on Bhattiprolu crystal
6. Inscriptions on Bhattiprolu caskets

[illegible]

SOUTH INDIA

- | | |
|--|---------------------------|
| 7. Inscriptions from Kongarpuliyangulam | } all in 1st century A.D. |
| 8. Inscriptions from Alagarmalai, Mettuppatti, and Karungalakudi | |
| 9. Inscriptions from Arittapatti and Tirupparangunram | |
| 10. Inscription No. (a) from Sittannavasal | |
| 11. Arikamedu Tamil inscriptions (group I) | |
| 12. Arikamedu Sanskrit inscription (group II) | |

NORTH INDIA

1	A 𑀅, 𑀆	Ā 𑀇, 𑀈	I 𑀉	U 𑀊	E 𑀋	O 𑀌	KU 𑀍, 𑀎	KO 𑀏, 𑀐	KHĀ 𑀑	GI 𑀒	GHA 𑀓	CHA 𑀔	CHHA 𑀕	JĀ 𑀖, 𑀗	JA 𑀘	
2	A 𑀅, 𑀆	Ā 𑀇, 𑀈		U 𑀊	E 𑀋, 𑀌		KĀ 𑀍, 𑀎	KA 𑀏, 𑀐	KHU 𑀑	GA 𑀒, 𑀓		CHAM 𑀔	CHHA 𑀕	JA 𑀖, 𑀗	E, E 𑀘, 𑀙	
3	A 𑀅, 𑀆				E 𑀋, 𑀌		KO 𑀏, 𑀐	KU 𑀍, 𑀎	KHU 𑀑	GA 𑀒		CHA 𑀓		JĀ 𑀖		
4	A 𑀅						KA 𑀍			GA 𑀒	CHI 𑀓			JĀ 𑀖		
5	A 𑀅, 𑀆	Ā 𑀇, 𑀈		U 𑀊	E 𑀋	O 𑀌	KĪ 𑀍, 𑀎	KU 𑀏, 𑀐	KHO 𑀑	GA 𑀒	GHA 𑀓	CHA 𑀔	CHHĀ 𑀕	JĀ 𑀖		
6	A 𑀅						KA 𑀍		KHU 𑀑	GRI 𑀒				JA 𑀖		
7	A 𑀅, 𑀆			U 𑀊	E 𑀋		KA 𑀍			GA 𑀒	GHI 𑀓	CHA 𑀔		JA 𑀖	E, E 𑀘, 𑀙	
8	A 𑀅, 𑀆	I 𑀉		U 𑀊	E 𑀋, 𑀌	O 𑀌	KU 𑀍, 𑀎	KHĀ 𑀏, 𑀐	GRI 𑀑	GHA 𑀒	CHA 𑀓	CHHA 𑀔	JU 𑀕	J 𑀖	E, E 𑀘, 𑀙	
9	A 𑀅, 𑀆	Ā 𑀇, 𑀈	I 𑀉	U 𑀊	E 𑀋, 𑀌	O 𑀌	KU 𑀍, 𑀎	KHĀ 𑀏, 𑀐	GRI 𑀑	GAM 𑀒	GHA 𑀓	CHA 𑀔		JĪ 𑀕	JĪ 𑀖	
10	A 𑀅, 𑀆			U 𑀊			KAU 𑀍, 𑀎	KĪ 𑀏, 𑀐	KHE 𑀑		GHO 𑀒	CHA 𑀓	CHHI 𑀔	JA 𑀕	E 𑀖	
11	A 𑀅, 𑀆	Ā 𑀇, 𑀈			E 𑀋, 𑀌		KA 𑀍, 𑀎	KU 𑀏, 𑀐		GI 𑀑	GRI 𑀒	GHA 𑀓	CHA 𑀔	CHHA 𑀕	JA 𑀖	
12	Ā 𑀇, 𑀈	Ā 𑀇, 𑀈	I 𑀉	U 𑀊	E 𑀋, 𑀌		KO 𑀏, 𑀐	KU 𑀍, 𑀎	KHE 𑀑	GO 𑀒	GU 𑀓	GHA 𑀔	CHA 𑀕	CHHĀ 𑀖	LIHI 𑀗	JA 𑀘

Forms within brackets are rare examples

1. Early group of Mathura inscriptions, mid-1st century A.D.
2. Kushāna inscriptions from Sarnath, Sahet-Mahet and Kosam, (Śaka) years 2-19
3. Inscriptions of Kanishka from Mathura, (Śaka) years 5-23
4. Mathura pedestal inscription of Kanishka, (Śaka) year 14
5. Inscriptions of Vasishka and Huvishka, (Śaka) years 28-58
6. Mathura inscription of Huvishka, (Śaka) year 33

PLATE VIIIa

JHA	NA	TO	THA	DA	DHA	NA	TI	THA	DI	DĪ	DHA	NAM					
μ	-	€	-	-	-	I, I	λ	σ	}	℥	α, α	ι, ι	1				
		TA				NI	NAM	TO		DI	DE	DHI	DHA	NA			
		€	€	-	-	λ	ι	λ	-	}	z	δ	α	ι	2		
				DA	DHA	NI	NĀ	TO	THI	DE	DHI	NA					
				€	€	λ	ι	λ	σ	z	α, α	ι			3		
						TO	TĀ	THA	DE	DHA	NĀ						
						λ, λ		σ	z	α	λ				4		
	TA	TI				DHĪ	NE	TO	TU	THĀ	DE	DHI	DHĀ	NĪ	NAM		
	€	z				€	λ, x	λ	λ	σ	z	δ	α	λ	ι	5	
	TA					NĪ		TI	THĀ	DE	DHI	NA					
	€					λ		λ	σ	z	α	ι				6	
	TA					NA	TA	THA	DE	DHI	NA						
	€					λ, x	λ	σ	z	α	ι					7	
	TE	TU	THA			NA	TO	TU	THI	DI	DHĪ	DHA	NĀ	NAM			
	z	z	σ			λ	λ	λ	σ	z	δ	α	λ	ι	ι	8	
JHA	TU	TŪ	THA			DHA	NE	NĪ	TĪ	TU	THU	DĪ	DHĪ	DHŪ	NA	NĪ	
μ	z	z	σ			€	λ	λ	λ	λ	σ	z	α	α	λ	ι	9
						NE	TI	TA	THA	DA	DI						
						λ	λ	λ	σ	z	z						10
	THA					NA	TĪ	TO	THA	DE	DĀ	DHE	NA				
	σ					λ, λ	λ	λ	σ	z	z	δ	λ	λ			11
JHA	THI					DHA	NA	TA	TU	THA	DI	DHA	NE	NA			
μ	σ					€	λ	λ	λ	σ	σ	z	α	α	λ	ι	12

7. Mathura inscriptions of Vāsudeva, (Śaka) years 64-80
8. Private inscriptions from Mathura, (Śaka) years 1-30
9. Private inscriptions from Mathura, (Śaka) years 31-99
10. Sarnath inscription of Aśvaghosha, (Śaka) year 40
 Allahabad Museum inscription (Śaka) year 23
 Pahladpur pillar inscriptions, not dated
11. Magha inscriptions from Kosam, (Śaka) years 52-139
12. Bandhogadh inscriptions, (Śaka) years 51-90

NORTH INDIA

	PAU	PHA	BŪ	BHA	MO	YA	RA	LA	LĪ	LA	VA	VI	ŚĪ	SHĀ
1	𑀧		𑀓	𑀡.𑀢	𑀘	𑀡.𑀢	𑀓.𑀔	𑀓.𑀔	𑀓.𑀔		𑀓.𑀔	𑀓.𑀔	𑀓.𑀔	
	PŪ		BU BO	BHI	MA	YA	YE	RE	RA	LA		VI	SĀ	SHĀ
2	𑀧		𑀓.𑀔	𑀡	𑀘	𑀡.𑀢	𑀓.𑀔	𑀓.𑀔	𑀓.𑀔		𑀓.𑀔	𑀓.𑀔	𑀓.𑀔	𑀓.𑀔
	PĀ		BU	BHU	MA	YĀ	YĀ	RĀ	LA	LĪ	VA	SĀ	ŚĪ	SHĀ
3	𑀧		𑀓	𑀡	𑀘	𑀡.𑀢	𑀓.𑀔	𑀓.𑀔	𑀓.𑀔	𑀓.𑀔	𑀓.𑀔	𑀓.𑀔	𑀓.𑀔	𑀓.𑀔
	PU		BU	BHA	MA	YA		RĀ	LA		VA			SHĀ
4	𑀧		𑀓	𑀡.𑀢	𑀘	𑀡.𑀢	𑀓.𑀔	𑀓.𑀔	𑀓.𑀔		𑀓.𑀔			𑀓.𑀔
	PRĪ PU		BU	BHA BHO	MA	YE	YA	RA	RĀ	LE	LA	LĪ	VRI	ŚĪ SĀ SHĀ
5	𑀧.𑀔		𑀓	𑀡.𑀢	𑀘.𑀙	𑀡.𑀢	𑀓.𑀔	𑀓.𑀔	𑀓.𑀔	𑀓.𑀔	𑀓.𑀔	𑀓.𑀔	𑀓.𑀔	𑀓.𑀔
	PU		BU	BHI	MA	YĪ		RA	LA		VA			
6	𑀧		𑀓	𑀡	𑀘.𑀙	𑀡.𑀢	𑀓.𑀔	𑀓.𑀔	𑀓.𑀔		𑀓.𑀔			
	PŪ		BA	BHA	MA	YA		RA	LA		VA	SĀ		SHĀ
7	𑀧		𑀓	𑀡	𑀘	𑀡.𑀢	𑀓.𑀔	𑀓.𑀔	𑀓.𑀔		𑀓.𑀔	𑀓.𑀔	𑀓.𑀔	𑀓.𑀔
	PŪ		BI	BHU BHO	MI	MĀ	YA	RI	RU	LĀ	LA	LA	VI	SĀ ŚĪ SHĀ
8	𑀧		𑀓	𑀡.𑀢	𑀘.𑀙	𑀡.𑀢	𑀓.𑀔	𑀓.𑀔	𑀓.𑀔	𑀓.𑀔	𑀓.𑀔	𑀓.𑀔	𑀓.𑀔	𑀓.𑀔
	PŪ		BU	BHI BHO	MA	MU	YA	RA	LĀ	LO	LĪ	VRI	VA	ŚĪ SHĀ
9	𑀧		𑀓	𑀡.𑀢	𑀘.𑀙	𑀡.𑀢	𑀓.𑀔	𑀓.𑀔	𑀓.𑀔	𑀓.𑀔	𑀓.𑀔	𑀓.𑀔	𑀓.𑀔	𑀓.𑀔
	PĪ	PHA	BI	BHO BHA	MA	MC	YŪ	RI	KA	LA	LĀ		VĪ	SĒ SHĀ
10	𑀧	𑀧	𑀓	𑀡.𑀢	𑀘.𑀙	𑀡.𑀢	𑀓.𑀔	𑀓.𑀔	𑀓.𑀔	𑀓.𑀔	𑀓.𑀔	𑀓.𑀔	𑀓.𑀔	𑀓.𑀔
	PU		BA	BHI BHA	MA		YA		RI	LA		VA	VAI	ŚĪ SŪ
11	𑀧		𑀓	𑀡.𑀢	𑀘.𑀙	𑀡.𑀢	𑀓.𑀔	𑀓.𑀔	𑀓.𑀔	𑀓.𑀔	𑀓.𑀔	𑀓.𑀔	𑀓.𑀔	𑀓.𑀔
	PO	PHA	BA	BE	BHI	BHA	ME	MO	YO	RĀ	RI	LA	LA	
12	𑀧.𑀔	𑀧.𑀔	𑀓.𑀔	𑀓.𑀔	𑀓.𑀔	𑀓.𑀔	𑀓.𑀔	𑀓.𑀔	𑀓.𑀔	𑀓.𑀔	𑀓.𑀔	𑀓.𑀔	𑀓.𑀔	𑀓.𑀔

Forms within brackets are rare examples

1. Early group of Mathura inscriptions, mid-1st century A.D.
2. Kushāna inscriptions from Sārnath, Sahet-Mahet and Kosam, (Śaka) years 2-19
3. Inscriptions of Kanishka from Mathura, (Śaka) years 5-23
4. Mathura pedestal inscription of Kanishka, (Śaka) year 14
5. Inscriptions of Vasishka and Huvishka, (Śaka) years 28-58
6. Mathura inscription of Huvishka, (Śaka) year 33

PLATE VIIIb

SE	HĀ	HE	CHCIHA	STHĀ	PIRĀ	TRA	URA	KVA				SYA	
ॐ. ॐ	ॐ. ॐ		ॐ	ॐ	ॐ	ॐ. ॐ	ॐ	ॐ				ॐ	1
SAM	SU	HĀ	HJ	RTTHA		TRA	GRA	NDA	KSHU	SHTHĀ	DDHYE	SYA	
ॐ. ॐ	ॐ. ॐ			ॐ		ॐ. ॐ		ॐ	ॐ	ॐ	ॐ	ॐ. ॐ	2
SAM	SA	HĀ	HA			TRA	RYA		SHKA	SHTHA	SYA	SYA	
ॐ. ॐ	ॐ. ॐ					ॐ	ॐ		ॐ	ॐ	ॐ	ॐ. (ॐ)	3
SAM	SA	HA	KKHA			TRA			SHKA	TSA	SYA	SYA	
ॐ. ॐ	ॐ		ॐ			ॐ			ॐ	ॐ	ॐ	ॐ	4
SA	HU	HĀ	DDHA		PRA	TRO	NYA	NTA	TVU	SYA	SYA	SYA	
ॐ	ॐ. ॐ		ॐ		ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ. ॐ	ॐ. ॐ	5
SA	HĀ		DDHA			TRA		NTL	SHKA		(ॐ) SYA	SYA	
ॐ. ॐ	ॐ. ॐ		ॐ			ॐ		ॐ	ॐ		ॐ. ॐ	ॐ. ॐ	6
SA	SU	HA			PRA	TRA	GRA	NDA		SHTHĀ	SYA	SYA	
ॐ. ॐ	ॐ. ॐ				ॐ	ॐ. ॐ		ॐ		ॐ	ॐ	ॐ	7
SI	SA	HA	NGA	CHCIHA		SRA	DRA	YYA				SYA	
ॐ. (ॐ)	ॐ. ॐ		ॐ	ॐ		ॐ. ॐ	ॐ	ॐ				ॐ. (ॐ)	8
SAM	ST	HA				RVVA	YYA	MBI	SHYA		SYA	SYA	
ॐ. ॐ	ॐ. ॐ					ॐ	ॐ. ॐ	ॐ	ॐ		ॐ. (ॐ)	ॐ	9
SA	HA	HĀ	JĀA	CHHRI		SRI	SVA				DVA	SYA	
ॐ	ॐ. ॐ		ॐ		ॐ	ॐ	ॐ				ॐ	ॐ	10
SAU	HA	HE	NCHIA		DRA	SKĪ						SYA	
ॐ. ॐ	ॐ. ॐ		ॐ		ॐ	ॐ. ॐ						ॐ. (ॐ)	11
SI	HĀ	HE					NYA						12
ॐ	ॐ. ॐ						ॐ						

- Mathura inscriptions of Vāsudeva, (Śaka) years 64-80
- Private inscriptions from Mathura, (Śaka) years 1-30
- Private inscriptions from Mathura, (Śaka) years 31-99
- Sarnath inscription of Aśvaghosha, (Śaka) year 40
Allāhabad Museum inscription, (Śaka) year 23
Pahladpur pillar inscriptions, not dated
- Magha inscriptions from Kosam, (Śaka) years 52-139
- Bandhogadh inscriptions, (Śaka) years 51-90

MALWA, GUJERAT, AND DECCAN

	A	I	U	E	O	KA	KĀ	KHA	GA	GHA	CHA	CHE	CHHA	JA
1	𑀓					𑀕	𑀕	𑀕	𑀕	𑀕	𑀕	𑀕	𑀕	𑀕
2	𑀓	𑀓	𑀓	𑀓	𑀓	𑀕	𑀕	𑀕	𑀕	𑀕	𑀕	𑀕	𑀕	𑀕
3	𑀓	𑀓	𑀓	𑀓	𑀓	𑀕	𑀕	𑀕	𑀕	𑀕	𑀕	𑀕	𑀕	𑀕
4	𑀓					𑀕	𑀕	𑀕	𑀕	𑀕	𑀕	𑀕	𑀕	𑀕
5	𑀓	𑀓	𑀓	𑀓	𑀓	𑀕	𑀕	𑀕	𑀕	𑀕	𑀕	𑀕	𑀕	𑀕
6	𑀓	𑀓	𑀓	𑀓	𑀓	𑀕	𑀕	𑀕	𑀕	𑀕	𑀕	𑀕	𑀕	𑀕
7						𑀕	𑀕	𑀕	𑀕	𑀕	𑀕	𑀕	𑀕	𑀕
8	𑀓	𑀓	𑀓	𑀓	𑀓	𑀕	𑀕	𑀕	𑀕	𑀕	𑀕	𑀕	𑀕	𑀕
9						𑀕	𑀕	𑀕	𑀕	𑀕	𑀕	𑀕	𑀕	𑀕
10	𑀓					𑀕	𑀕	𑀕	𑀕	𑀕	𑀕	𑀕	𑀕	𑀕
11	𑀓	𑀓	𑀓	𑀓	𑀓	𑀕	𑀕	𑀕	𑀕	𑀕	𑀕	𑀕	𑀕	𑀕
12	𑀓	𑀓	𑀓	𑀓	𑀓	𑀕	𑀕	𑀕	𑀕	𑀕	𑀕	𑀕	𑀕	𑀕

WESTERN DECCAN

1. Nasik inscription of Hapusiri, mid-1st century A.D.
2. Inscriptions of the time of Nahapāna and Gautamīputra Śātakarṇi, early 2nd century A.D.
3. Inscriptions of Pulumāvi, mid-2nd century A.D.
4. Inscriptions of Yajñasiri and later Sātavāhanas, late 2nd and early 3rd century A.D.

GUJERAT AND MALWA

5. Inscriptions of the later Western Kshatrapa rulers, late 2nd and 3rd century A.D.
6. Badva, Nandsa, and Barnala Yūpa inscriptions, between A.D. 282 and 335

PLATE IXa

JHA	NA	TA	THA	DA	DHA	NI	TU	TI	THA	DA	DHA	NI					
.	.	C	O	2		I	h. h			2	.	2	1				
NA	NO	TA	THA	DE	DU	DHI	NA	TA	TI	THA	DI	DE	DHA	DHI	NA	NI	
.	h. h	C	O	2. 2	2	I	h. h		O	2, 2	2. 2	2. 2	2. 2	2. 2	2. 2	2. 2	2
JHA	NO	TA	THI	DA		NA	TO	TA	THI	DA	DI	DHA	DHI	NA			
h	h. h	C	O	2		I	h. h		O	2, 2	2, 2	2. 2	2. 2	2. 2	2. 2	2. 2	2
NO				DE	DHA	NI	TA	TI			DI	DHA	DHI	NA			
.	h			2	2	I	h. h			2		2	2	2	2	2	2
		TU		DA	DHA	NI	TI	TU	THA	THI	DA	DA	DHI	DHA	NI	HAU	
.		2		2	2	I	h. h		O. O	2, 2	2, 2	2, 2	2, 2	2, 2	2, 2	2, 2	2
		TA				NA	TA	TI		DA	DHA	DHA	NU	NA			
.		C				2. 2	h. h		O	2	2	2. 2	2. 2	2. 2	2. 2	2. 2	2
						NA	TA	TU		DI	DHI	NA					
.						2. 2	h. h			2	2	2. 2	2. 2	2. 2	2. 2	2. 2	2
NO		THI	DA			NA	TA	TO	THA	DA	DHI	DHA	NA				
.	h		O	2		I	h. h		O	2	2	2. 2	2. 2	2. 2	2. 2	2. 2	2
NO							TA	THA		DI	DHA	NA					
.	h						h		O	2	2	2. 2	2. 2	2. 2	2. 2	2. 2	2
		TI		DU		NA	TI	TI	THA	DI			NA				
.	2			2		2	h. h		O	2			2				2
NA	NO	TO	THI	DA		NA	TA	THA		DI	DHI	DHI	NI	NU			
.	h. h	2	O	2		I	h. h. h		O	2	2. 2	2. 2	2. 2	2. 2	2. 2	2. 2	2
NU	TA	THA	DA	DHA		NA	TU	TO	THO	DA	DHI	DHA	NI	NO			
h	C	O	2	2		2. 2	h. h		O	2	2. 2	2. 2	2. 2	2. 2	2. 2	2. 2	2

7. Bijayagadh inscriptions of the Yaudheyas and of Vishnupardhana, A.D. 371

8. Gunji (Chhattisgadh) rock inscription of Kumaravaradatta, early 3rd century A.D.
SOUTH-WEST DECCAN

9. Myakdoni inscription of a later Pulumāvi, 3rd century A.D.

10. Malvalli inscription of Hāritiputra Śātakarṇi, early 3rd century A.D.

EASTERN DECCAN

11. Inscriptions from Amaravati and Kodavali, late 2nd and early 3rd century A.D.

12. Inscriptions of the Ikshvākus, late 3rd century A.D.

MALWA, GUJERAT, AND DECCAN

	Pi	PHA	SA	BHA	MA	VA	RĀ	RI	LĀ	LA	LA	VA	SA	SHA
1	८			८	४	५	१	१	५	५		४		
2	PA PU PHA BĀ BHŪ BHO MĀ YĀ YA RĀ RU LĀ VRI VA SA SHA	८ ५ ८	८	८ ८ ८	४ ४ ४	५ ५ ५	१ १ १	१ १ १	५ ५ ५	५ ५ ५		४ ४ ४	८ ८ ८	४
3	PU PHA BI BU BHA MĀ ME YĀ YO RI RA LĀ LA LU VĀ	५ ५ ८	८ ८ ८	८ ८ ८	४ ४ ४	५ ५ ५	१ १ १	१ १ १	५ ५ ५	५ ५ ५	५ ५ ५	४ ४ ४		
4	PU PI PHA BĀ BA BHĪ MO MA YA YO RĀ RI LA LA LĪ VA VĪ SE SU SHA SHU	५ ५ ८	८ ८ ८	८ ८ ८	४ ४ ४	५ ५ ५	१ १ १	१ १ १	५ ५ ५	५ ५ ५	५ ५ ५	४ ४ ४	८ ८ ८	४ ४ ४
5	PŪ PA PHA BA BHŪ MĀ MO YO RU LA VRI VĪ SŪ SĪ SHA	५ ५ ८	८ ८ ८	८ ८ ८	४ ४ ४	५ ५ ५	१ १ १	१ १ १	५ ५ ५	५ ५ ५	५ ५ ५	४ ४ ४	८ ८ ८	४ ४ ४
6	PU PA PHA BA BHŪ MĀ MO YA RO LI LA VI SĀ SA SHU	५ ५ ८	८ ८ ८	८ ८ ८	४ ४ ४	५ ५ ५	१ १ १	१ १ १	५ ५ ५	५ ५ ५	५ ५ ५	४ ४ ४	८ ८ ८	४ ४ ४
7	PĀ BO BHA MO MA YA YU RU LĀ VA VĪ	८	८	८	४ ४ ४	५ ५ ५	१ १ १	१ १ १	५ ५ ५	५ ५ ५	५ ५ ५	४ ४ ४	८ ८ ८	४ ४ ४
8	PU BE MĀ RI LĀ VĀ	५	८	४	५	१	५	५	५	५	५	५	५	५
9	PU BHA MA YA RĀ LA LĪ VO VĀ	५	८	४	५	१	५	५	५	५	५	५	५	५
10	PU BO BU BHA BHO MA MĀ YA RA LA VĀ VA	५	८ ८ ८	८ ८ ८	४ ४ ४	५ ५ ५	१ १ १	१ १ १	५ ५ ५	५ ५ ५	५ ५ ५	५ ५ ५	५ ५ ५	५ ५ ५
11	PU PŪ BO BU BHĀ MO MŪ YU RI RŪ LA LĀ VO VĪ	५ ५	८ ८	८ ८	४ ४	५ ५	१ १	१ १	५ ५	५ ५	५ ५	५ ५	५ ५	५ ५
12	PU PŪ BO BU BHĀ MO MŪ YU RI RŪ LA LĀ VO VĪ	५ ५	८ ८	८ ८	४ ४	५ ५	१ १	१ १	५ ५	५ ५	५ ५	५ ५	५ ५	५ ५

WESTERN DECCAN

1. Nasik inscription of Hakusiri, mid-1st century A.D.
2. Inscriptions of the time of Nahapāna and Gautamīputra Śātakarṇi, early 2nd century A.D.
3. Inscriptions of Pulumāvi, mid-2nd century A.D.
4. Inscriptions of Yajñasiri and later Śātavāhanas, late 2nd and early 3rd century A.D.

GUJERAT AND MALWA

5. Inscriptions of the later Western Kshatrpa rulers, late 2nd and 3rd century A.D.
6. Badva, Nandsa, and Barnala Yūpa inscriptions, between A.D. 282 and 335

[illegible]

* The tailed *Ma* and the hooked *Ha* are rare examples in the late inscriptions

7. Bijayagadh inscriptions of the Yaudheyas and of Vishnuvardhana, A.D. 371.

8. Gunji (Chhattisgarh) rock inscription of Kumaravaradatta, early 3rd century A.D.

SOUTH-WEST DECCAN:

9. Myakdoni inscription of a later Pulumāvi, 3rd century A.D.

10. Malvalli inscription of Hāritiputra Śātakarṇi, early 3rd century A.D.

EASTERN DECCAN:

11. Inscriptions from Amaravati and Kodavali, late 2nd and early 3rd century A.D.

12. Inscriptions of the Ikshvākus, late 3rd century A.D.

MIDDLE GANGES VALLEY

	A	I	U	E	O	KU	KRI	KHA	KHI	GA	GU	GHA	CHI	CHHA	JĀ	JU
1	ॠ, ॡ	ऀ	ॢ	ॣ	।	क, ॠ	ख, ॡ	ग, ॢ	घ, ॣ	ङ	च	छ	ज	झ	झ	झ
2	ॠ	ॡ	ॢ	ॣ	।	क	ख	ग	घ	ङ	च	छ	ज	झ	झ	झ
3	ॠ	ॡ	ॢ	ॣ	।	क	ख	ग	घ	ङ	च	छ	ज	झ	झ	झ
4	ॠ	ॡ	ॢ	ॣ	।	क	ख	ग	घ	ङ	च	छ	ज	झ	झ	झ
5	ॠ	ॡ	ॢ	ॣ	।	क	ख	ग	घ	ङ	च	छ	ज	झ	झ	झ
6	ॠ	ॡ	ॢ	ॣ	।	क	ख	ग	घ	ङ	च	छ	ज	झ	झ	झ
7	ॠ	ॡ	ॢ	ॣ	।	क	ख	ग	घ	ङ	च	छ	ज	झ	झ	झ
8	ॠ	ॡ	ॢ	ॣ	।	क	ख	ग	घ	ङ	च	छ	ज	झ	झ	झ
9	ॠ	ॡ	ॢ	ॣ	।	क	ख	ग	घ	ङ	च	छ	ज	झ	झ	झ
10	ॠ	ॡ	ॢ	ॣ	।	क	ख	ग	घ	ङ	च	छ	ज	झ	झ	झ
11	ॠ	ॡ	ॢ	ॣ	।	क	ख	ग	घ	ङ	च	छ	ज	झ	झ	झ
12	ॠ	ॡ	ॢ	ॣ	।	क	ख	ग	घ	ङ	च	छ	ज	झ	झ	झ

1. Allahabad Pillar inscription of Samudra Gupta, mid-4th century A.D.
2. Karamdanda and Bhitari Pillar inscriptions, mid-5th century A.D.
3. Gupta inscriptions, 5th century A.D.
4. Inscriptions of Magadha Maukharis, early 6th century A.D.
5. Amauna plate of Nandana, (Gupta) year 232
6. Haraha inscription of Īśānavarman, (Vikrama) year 611

PLATE Xa

JHA	NĀ	TĀ	TO	THA	DI	DHA	NĀ	NO	TU	TO	THA	THI	DU	DAU	DHA	DHĪ	NĀ	NI	1
		८	८		३	८	२५, २५	२	५	०	०	०	५	२	०	५	५	५	
		TO	THE			DHA	NE	TUH	TI	THU	DI	DE	DHI	DHI	NU	NĪ			2
		२	०			८	५	५	५	५	२	२	५	५	५	५	५	५	
		TĀ	TE				NĀ	NĀI	TĀ	TE	THU	THI	DU	DĪ	DHĀ	DHE	NRI	NĀI	3
		८	८				२५, २५	५	५	५	५	५	५	५	५	५	५	५	
		TI		DĀ			NO	TĀ	TI	THI	DĀ	DE	DHĀ	DHI	NU	NĪ			4
		२		३			२५	५	५	५	२	२	५	५	५	५	५	५	
				DĀ			NĀ	TI	THĀ		DE		DHA	NU	NO				5
				३			२५	५	५		२		५	५	५	५	५	५	
		TĀ	THI	DI	DHA	NĀ	TU	TĀ	THA	DĀ	DO	DHI	DHO	NU	NĪ				6
		८	०	३	८	२५, २५	५	५	५	२	२	५	५	५	५	५	५	५	
		TI			DHA	NAU	TO	THĀ		DĪ		DHĪ	NĀI	NĀI					7
		२			८	२५	५	५	५	२		५	५	५	५	५	५	५	
		TĀ				NE	TĀ	THO		DI		DHI	NAU						8
		२				२५	५	५	५	२		५	५	५	५	५	५	५	
		TI				NE	TĀ	TU	THĀ	THI	DI	DAU	DHI	DHĀ	NĀ	NAU			9
		२				२५	५	५	५	५	२	२	५	५	५	५	५	५	
JHA		TĀ	THI	DA	DHA	NĀ	NAU	TĀI	TO	THI	DĀ	DU	DHI	NAU	NU				10
५		८	०	२	८	२५, २५	५	५	५	५	२	२	५	५	५	५	५	५	
		TĀ				NĪ	TI				DE				NE				11
		८				२५	५				२				२				
		TĀ				NĪ	TO	THĀ		DE	DU	DHA	NU						12
		८				२५	५	५	५	२	२	५	५	५	५	५	५	५	

7. Bodhgaya inscription of Mahānāman, (Gupta) year 269
8. Copper plates of Harshavardhana, early 7th century A.D.
9. Spurious Gaya plate of Samudra Gupta, mid-7th century A.D.
10. Aphsad inscription of Ādityasena, late 7th century A.D.
11. Deobarnark inscription of Jīvitagupta, late 7th century A.D.
12. Nalanda stone inscription of Yaśovarman, early 8th century A.D.

MIDDLE GANGES VALLEY

1	PĀ PAU	PHU	BĀ BHĪ BHU	MĀ	YAU	RU	RŪ LI LO	LA	VI VĪ	SŪ SRĪ	SHĀ SHŪ
2	PĀ PŪ		BA	BHĪ	MO MŪ	YA	RU	LĀ	VĪ	SĀU	SHE
3	PŪ		BU	BHŪ	MI	YA YO	RU	LA LĪ	VĀ VRĪ	SĀ	SHA
4	PĀ PHA		BHĪ BHŪ	MAU	YU	RĪ KAI	LO		VI	SRĪ	SHU
5	PAU		BRA	BHŪ	MĀ	YAI	RU	LĀ	VI	SŌ	SHA
6	PU PHA		BA	BHŪ	MA	YA RĀ RĪ	LO		VO VRĪ	SĀ	SHI
7	PA PRA	PHA		BHŪ	MI	YĀ YE RĪ RU	LĀ		VE*	SŪ SĪ	SHI
8	PU PŪ	PHA		BHU	MĀ	YĪ RĪ RŌ	LA		VI VĪ	SRĪ	SHA
9	PRĪ PAU			BHĪ	ME	YĀ YO RĀ RU	LĪ		VĀ VĪ	SĀ	SHA
10	PAH	PHA		BHĀ BHŪ	MAU	YO	RE	LŪ	VAI	SĀJ	SHĀ
11	PĀ			BHĪ	MĪ	YO	RĀ	LA	VA	SĀ	
12	PI PHU			BHŪ	MŪ	YO	RAI	LO	VU VŪ	SŪ	SHE

* Va is used for both Va and Ba hereafter

1. Allahabad Pillar inscription of Samudra Gupta, mid-4th century A.D.
2. Karamdanda and Bhitari Pillar inscriptions, mid-5th century A.D.
3. Gupta inscriptions, 5th century A.D.
4. Inscriptions of Magadha Maukharis, early 6th century A.D.
5. Amauna plate of Nandana, (Gupta) year 232
6. Haraha inscription of Īśānavarman, (Vikrama) year 611

SU	HU	HĪ	NGA	NHA	ŃCHA	JŃĀ	NTA	NDĀ	RJJA	CHCHHA	DHRU	STHA	KSHU	SYA	1
𑀲	𑀢	𑀢	𑀢	𑀢	𑀢	𑀢	𑀢	𑀢	𑀢	𑀢	𑀢	𑀢	𑀢	𑀢	𑀢
SA	HĀ	NGI	ŃCHE						DHYO	CHCHHI	TRA	SHTHĀ	KSHI	NYA	2
𑀲	𑀢	𑀢	𑀢						𑀢	𑀢	𑀢	𑀢	𑀢	𑀢	𑀢
SĀ SŪ	HĀ		ŃCHE			NDĀ			TTI	CHCHHRI	NGRĀ	STHĀ	KSHI	DDHYĀ	3
𑀲	𑀢		𑀢			𑀢			𑀢	𑀢	𑀢	𑀢	𑀢	𑀢	𑀢
SĪ	HĪ	HŪ	RŃGA	ŃJA	JŃĀ	NDĀ			RJJĪ	CHCHHĀ	ŚRŪ	STHI	KKRĀ	NYA	4
𑀲	𑀢	𑀢	𑀢	𑀢	𑀢	𑀢			𑀢	𑀢	𑀢	𑀢	𑀢	𑀢	𑀢
SI	HĀ														5
𑀲	𑀢														𑀢
SA	SO	HĀ	HRI	LĪM	TMA	JŃĀ			TTĀ		TTRE	SHTHI	KSHI	SYA	6
𑀲	𑀢	𑀢	𑀢	𑀢	𑀢	𑀢			𑀢		𑀢	𑀢	𑀢	𑀢	𑀢
SĀ SŪ	HĪ		YĀN	NDHO	JŃĀ	NDĒ			KHYA	CHCHHI	STU	STHĀ	PTO	DHYAM	7
𑀲	𑀢		𑀢	𑀢	𑀢	𑀢			𑀢	𑀢	𑀢	𑀢	𑀢	𑀢	𑀢
SE	HĪ		HPA		JŃĪ	NDĀ				CHCHHU	ŚRĪ	SHTHA			8
𑀲	𑀢		𑀢		𑀢	𑀢				𑀢	𑀢	𑀢			𑀢
SA	SO	HĪ	MBA		JŃĀ					CHCHHA	SHI	SHTHĀ	HVRI	DYŪ	9
𑀲	𑀢	𑀢	𑀢		𑀢					𑀢	𑀢	𑀢	𑀢	𑀢	𑀢
SI	SU	HĀ	ŃKA	NTHI		NDĀ			NNE	CHCHHI	TPRA	STHI	DGA	CHYA	10
𑀲	𑀢	𑀢	𑀢	𑀢		𑀢			𑀢	𑀢	𑀢	𑀢	𑀢	𑀢	𑀢
SA	HĀ			ŃCHA	JŃYĀ	SHŃA					SWI			STYA	11
𑀲	𑀢			𑀢	𑀢	𑀢					𑀢			𑀢	𑀢
SĀ	III	M	NDHA	JŃĀ	NDĀ					CHCHHA				SYĀ	12
𑀲	𑀢	𑀢	𑀢	𑀢	𑀢	𑀢				𑀢				𑀢	𑀢

7. Bodhgaya inscription of Mahānāman, (Gupta) year 269
8. Copper plates of Harshavardhana, early 7th century A.D.
9. Spurious Gaya plate of Samudra Gupta, mid-7th century A.D.
10. Apsad inscription of Ādityasena, late 7th century A.D.
11. Deobarnark inscription of Jīvitagupta, late 7th century A.D.
12. Nalanda stone inscription of Yaśovarman, early 8th century A.D.

EASTERN INDIA

BENGAL

	A	Ā	I	U	E	O	KRI	KHA	GA	GHA	CHA	CHHA	JA
1	.	.	.	.	.	.	ꣳ				ꣳ	.	E
2	ꣳ, ꣳ	ꣳ, ꣳ	ꣳ, ꣳ	ꣳ	ꣳ, ꣳ	.	ꣳ, ꣳ	ꣳ, ꣳ	ꣳ, ꣳ	ꣳ, ꣳ	ꣳ, ꣳ	.	E
3	ꣳ, ꣳ	ꣳ, ꣳ	ꣳ	ꣳ	ꣳ, ꣳ	.	ꣳ, ꣳ	ꣳ, ꣳ	ꣳ, ꣳ	ꣳ, ꣳ	ꣳ, ꣳ	.	ꣳ, ꣳ
4	ꣳ, ꣳ	ꣳ, ꣳ	ꣳ	ꣳ	ꣳ	.	ꣳ	ꣳ	ꣳ	ꣳ	ꣳ	.	ꣳ, ꣳ
5	ꣳ, ꣳ	ꣳ, ꣳ	ꣳ	ꣳ	ꣳ	.	ꣳ, ꣳ	ꣳ, ꣳ	ꣳ	ꣳ	ꣳ	.	ꣳ, ꣳ
6	ꣳ, ꣳ	ꣳ, ꣳ	ꣳ	ꣳ	ꣳ	ꣳ	ꣳ, ꣳ	ꣳ, ꣳ	ꣳ	ꣳ	ꣳ, ꣳ	.	ꣳ, ꣳ

NEPAL

	A	Ā	I	U	E	KRI	KAI	KHA	KHI	GA	GU	GHA	CHA	CHAI	CHI	JA	JAI
7	ꣳ, ꣳ	ꣳ, ꣳ	ꣳ	.	.	.	ꣳ, ꣳ	ꣳ, ꣳ	ꣳ, ꣳ	ꣳ	ꣳ	ꣳ	ꣳ	ꣳ	ꣳ	ꣳ	ꣳ
8	ꣳ	ꣳ	ꣳ	.	ꣳ	.	ꣳ, ꣳ	ꣳ, ꣳ	ꣳ, ꣳ	ꣳ	ꣳ	ꣳ	ꣳ	ꣳ	ꣳ	ꣳ	ꣳ
9	ꣳ, ꣳ	ꣳ, ꣳ	ꣳ	.	ꣳ, ꣳ	.	ꣳ, ꣳ	ꣳ, ꣳ	ꣳ, ꣳ	ꣳ	ꣳ	ꣳ	ꣳ	ꣳ	ꣳ	ꣳ	ꣳ
10	ꣳ, ꣳ	ꣳ, ꣳ	ꣳ	.	ꣳ	.	ꣳ, ꣳ	ꣳ, ꣳ	ꣳ	ꣳ	ꣳ	ꣳ	ꣳ	ꣳ	ꣳ	ꣳ	ꣳ
11	ꣳ, ꣳ	ꣳ, ꣳ	ꣳ	ꣳ	ꣳ, ꣳ	.	ꣳ, ꣳ	ꣳ, ꣳ	ꣳ, ꣳ	ꣳ	ꣳ	ꣳ	ꣳ	ꣳ	ꣳ	ꣳ	ꣳ

1. Susunia rock inscription of Chandravarman, 4th century A.D.
2. Gupta copper plates, dated between (Gupta) years 113 and 163
3. Copper plates, 6th century A.D.
4. Nidhanpur plates of Bhāskaravarman, early 7th century A.D.
5. Inscriptions of the Khadga dynasty, late 7th century A.D.
6. Khalimpur plate and Mainamati plates, 8th century A.D.

PLATE XIa

JWA	NA	TA	THA	DA	DHA	NĀ	TE	THA	DA	DHI	NA	1
-	-	-	-	-	-	म	ते	-	-	धि	न	
-	-	TI TU	-	DO	DHA	NĀ NO TU TAU THI THĪ	DĀ DĪ DHĀ DHŪ	NU	-	-	-	2
-	-	ति तु	-	द	ह	म, नो, तु, तौ, ति, ती, दा, दी, धा, धू	नु	-	-	-	-	
-	-	TI TĀ	-	DU	DHA	NĀ TI TUH THI THĪ	DU DO DHĪ DHŪ	NE NO	-	-	-	3
-	-	ति ता	-	ड	ह	न, ति, तुह, ति, ती, दु, दू, धि, धू	ने, नू	-	-	-	-	
-	-	TA	-	DU	DHA	NĀ TI TĪ	THA	DA	DHĀ DHĀU	NAU	-	4
-	-	त	-	ड	ह	न, ति, ती	था	दा	धा, धाव	नाव	-	
-	-	TĀ	THE	-	-	NĀ TI	THA	DĪ DŪ	DHI	NU	-	5
-	-	त	थे	-	-	न, ति	था	दी, दू	धि	नु	-	
-	-	TI	THĀ	DĀ	-	NĀ NI TO TU	THA	DAI	DHŪ	NU	-	6
-	-	ति	था	दा	-	न, नि, तो, तु	था	दा, धू	नु	-	-	
-	-	TĪ	THĀ	-	DHAM	NĀ NAI TI TU THĀ THO DE	DAU DHĀ DHĀU NRĪ	NO	-	-	-	7
-	-	ति	था	-	ह	न, ना, ति, तु, था, थो, दे	दाव, धा, धाव, नरी	नू	-	-	-	
-	-	TU	-	-	DHA	NĀ NE TI TO THI THAU DI	DRI DHĀ DHŪ NU	NĪ	-	-	-	8
-	-	तु	-	-	ह	न, ने, ति, तो, ति, तौ, दि, द्री, धा, धू	नु, नी	-	-	-	-	
-	-	TI TU	-	DI	-	NĀ NĪ TĀ TI THĀ THŪ	DI DO DHĀ DHI NU	NO	-	-	-	9
-	-	ति तु	-	दि	-	न, नी, ता, ति, था, थू	दि, दू, धा, धि, नू	नू	-	-	-	
-	-	TA	-	DU	-	NĀ TI	THĀ	DO	DHI	NU	NRĪ	10
-	-	त	-	ड	-	न, ति	था	दू	धि	नु	नरी	
-	-	TĀ TU	THA	DĀ	DHĀ	NĀ NĪ TŪ TAU THĀ THAI	DĀ DI DHĀ DHE	NĀ NĪ	-	-	-	11
-	-	त, तु	था	दा	ह	न, नी, तू, तौ, था, था, दा, दि, धा, धे	न, नी	-	-	-	-	

7. Inscriptions dated between (Śaka) years 386 and 427
8. Inscriptions dated between (Śaka) years 428 and 516
9. Inscriptions dated between (Śaka) years 517 and 535, and (Harsha) year 59
10. Inscriptions dated between (Harsha) years 60 and 95
11. Inscriptions dated between (Harsha) years 103 and 159

EASTERN INDIA

BENGAL

	PU	PA	BA	BHA	MI	YA	RĀ	LA	LA	VA	ŚRĪ	SHA
1	প				মি	যা	রা	লা	লা	বা	শ্রী	শা
2	পা, পু	ধু	বা, বো	বু, ভু	মা, মি	যা, যি	রা, রি	লা	লা	বা, বী	শ্রী, শী	
3	পা, পু	ধা	বা	বু, ভু	মা, মি	যা, যি	রা, রি	লা		বা, বী	শ্রী, শী	শা
4	পা	ধা		বু, ভু	মা, মি	যা, যি	রা, রি	লা		বা, বী	শ্রী, শী	শা
5	পু	ধা		বু, ভু	মা, মি	যা, যি	রা, রি	লা		বা, বী	শ্রী, শী	শা
6	পা, পু	ধা		বু, ভু	মা, মি	যা, যি	রা, রি	লা		বা, বী	শ্রী, শী	শা

NEPAL

	PŪ	PĪ	BĀ	BHI	BHŪ	MĀ	MAU	YU	YO	RU	RO	LO	VRI	VO	SĀ	SŪ
7	पू, पि		बा	भी	भू	मा	माउ	यू	यो	रू	रो	लो	व्री	वो	सा	सू
8	पा, पी		बा	भी	भू	मा	मा	यि	यी	रू	रा	ले	वे	वा	सा	
9	पा, पी		बा	भू	भू	मा	मे	यू	यो	रि	रो	ली	व्री	वी	सी	
10	पू, पि	पा	बा	भू	भू	मा	मा	यि	यी	रू	रा	ले	वा	वा	सू	शा
11	पा, पी	पा	बा	भू	भू	मा	मी	या	यो	रि	रो	ली	वा	वी	सू	शा

1* In Bengal hereafter the form of *Va* is used for *Va* and *Ba*

1. Susunia rock inscription of Chandravarman, 4th century A.D.
2. Gupta copper plates. Dated between (Gupta) years 113 and 163
3. Copper plates, 6th century A.D.
4. Nidhanpur plates of Bhāskaravarman, early 7th century A.D.
5. Inscriptions of the Khadga dynasty, late 7th century A.D.
6. Khalimpur plate and Mainamati plates, 8th century A.D.

PLATE XIb

SI	SRI	HĀ	NHA	NCHA	JNĀ	NDA	SHTA	SVĀ	NDRA	TRA	SYA	
ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	1
SU	HĀ		NCHA	JNĀ	NDRA	SHAT	TTĀ	SRI	TRAI	2* KSHĒ	RYĀ	
ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	2
SĀ	HĪ	HU	NGĀ	NCHHA	JNŌ	NDHA	2* SHTHA	TTĀ	RJJU	STHA	RVA	
ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	3
SU	HĀ		NKO	NCHA	JNĀ	NDHU	SHTHĀ	CHCHHI	JJHI	PRĪ	KĀT	
ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	4
SŪ	HA		NGO	NJA	JNĀ	T	STHI	TPA	KHYĀ	SRI	2* KSHI	HYA
ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	5
SU	HĀ	HĪ	NGA	NCHI	SHNU	N			RNNA	2* KSHMI	2* KSHA	NYA SYĀ
ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	6

SAI	SAM	HU	HŪ	NGHE	NJA	JNŌ	NDA	2* SHTHA	CHCHHRI	HLĀ	TPRA	STHU	RYĀ
ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	7
SŪ	SĪ	HI	HA		NCHA	JNĀ	2* SHNĀM	RTTHA	TTĀ	2* RNNA	BRĀ	2* KSHA	HYA
ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	8
SĀ	SAU	HE	HA	NKU	NCHĀ	JNĀ	NDA	STHI	CHCHHE	TTĀ	DHRU	RSĀ	
ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	9
SĀ	HI		NSĀ	NCHĀ	JNĀ	NDE	2* SHTA				PRA	TSNĀ	RTYĀ
ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	10
SĀ	HI	HĪ	NKHU	NCHCHHU	JNĀ	NDA	STHĀ	SPHU	TTĀ	MPRA	KSHI	RVE	
ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	11

2* In these examples dental *Sa* is used for cerebral *Sha*

- 7 Inscriptions dated between (Śaka) years 386 and 427
8. Inscriptions dated between (Śaka) years 428 and 516
9. Inscriptions dated between (Śaka) years 517 and 535, and (Harsha) year 59
10. Inscriptions dated between (Harsha) years 60 and 95
11. Inscriptions dated between (Harsha) years 103 and 159

MATHURA AND THE NORTH WEST REGION

	A	Ā	I	U	E	O	KRI	KHA	GU	GHA	CHA	CHHA	JĀ									
1	ॠ	ॡ	.		ॢ	ॣ	।		॥.॥		॥		॥									
	A						KU	KĪ	KHĀ	KHA	GU	GKA	CHI	JĪ								
2	ॠ						॥.॥	॥.॥	॥.॥	॥.॥		॥		॥								
							KĀ	KĪ	KHĀ	KHI	GA		CHI	JO								
3							॥.॥	॥.॥	॥.॥		॥		॥	॥								
	Ā	I					KO		GU	GO		CHĒ	CHHA	JĪ								
4	ॠ						॥		॥.॥		॥	॥	॥	॥								
							KA			GHA	CHA											
5							॥		॥	॥	॥											
	A	Ā		U			KŪ	KHA	GA	GHE	CHI	CHĀ	JA									
6	ॠ.ॠ		ॢ				॥	॥	॥	॥	॥.॥		॥	॥								
	A						KU	KHĀ	GĀ		CHA		JĪ									
7	ॠ						॥	॥	॥		॥.॥		॥	॥								
	Ā	I	U	AI			KĪ	KU	KHA	GU	GĪ	CHA	JĪ									
8	ॠ		ॢ	ॣ			॥.॥	॥	॥.॥		॥		॥	॥								
	A						KI	KA		GU		CHHA	JA									
9	ॠ						॥.॥	॥	॥			॥	॥	॥								
	A	Ā	I	Ī	U	Ū	E	AI	AU	KĀ	KŪ	KHE	KHĪ	GI	GU	GHĀ	GHU	CHŪ	CHO	JĪ	JĪ	
10	ॠ.ॠ	ॡ	ॢ	ॣ	।	॥	ॢ	ॣ	ॣ	॥	॥	॥.॥	॥.॥	॥.॥	॥.॥	॥.॥	॥.॥	॥.॥	॥.॥	॥	॥	
	A	Ā	I	Ī	U	Ū	E	AI	O	RI	KĀ	KŪ	KHE	KHĪ	GI	GU	GHĀ	GHU	CHŪ	CHO	JĪ	JĪ
11	ॠ.ॠ	ॡ	ॢ	ॣ	।	॥	ॢ	ॣ	ॣ	॥	॥	॥.॥	॥.॥	॥.॥	॥.॥	॥.॥	॥.॥	॥.॥	॥.॥	॥	॥	
	A	Ā	I	Ī	U	Ū	E	AI	O	RI	KĀ	KŪ	KHE	KHĪ	GI	GU	GHĀ	GHU	CHŪ	CHO	JĪ	JĪ
12	ॠ.ॠ	ॡ	ॢ	ॣ	।	॥	ॢ	ॣ	ॣ	॥	॥	॥.॥	॥.॥	॥.॥	॥.॥	॥.॥	॥.॥	॥.॥	॥.॥	॥	॥	
	A	Ā	I	Ī	U	Ū	E	AI	O	RI	KĀ	KŪ	KHE	KHĪ	GI	GU	GHĀ	GHU	CHŪ	CHO	JĪ	JĪ

1. Mathura inscription of Chandra Gupta II, late 4th century A.D.
2. Mathura inscription of Kumāra Gupta I, early 5th century A.D.
3. Mehrauli iron pillar inscription of Chandra, early 5th century A.D.
4. Indor plate of Skanda Gupta, (G.E.) 146
5. Shorkot inscription, (Gupta) year 83
6. Kura inscription of Toramāna, late 5th century A.D.

PLATE XIIa

JHA	NA	TA	THA	DA	DHA	NA	TA	THA	DI	DHI	NI	
						𑂔	𑂕	𑂖	𑂗	𑂘	𑂙	1
						NA	TI	TO	DI	DHI	DHI	NI
						𑂔	𑂕	𑂖	𑂗	𑂘	𑂙	2
						NI	TI	TAU	DE	DRI	III	DHI
						𑂗	𑂕	𑂖	𑂗	𑂘	𑂙	3
	TA		DA	DU		NA	NA	TU	TAI	THA	DU	DHI
	𑂔		𑂕	𑂖		𑂔	𑂕	𑂖	𑂗	𑂘	𑂙	4
							TU		DA	DHI	NA	
							𑂕		𑂗	𑂘	𑂙	5
						NA	TO	TI	THA	DA	DE	DHA
						𑂔	𑂕	𑂖	𑂗	𑂘	𑂙	6
						NA	TU	TI	THA	DU		NA
						𑂔	𑂕	𑂖	𑂗	𑂘	𑂙	7
	TA	TU		DO		NAI	TU	TRI	THA	DA	DU	DHI
	𑂔	𑂕		𑂖		𑂔	𑂕	𑂖	𑂗	𑂘	𑂙	8
						DHA	NO	TE	TO	DI	DHI	NI
						𑂗	𑂕	𑂖	𑂗	𑂘	𑂙	9
	TU		DE			DHI	NA	NU	TU	TRI	THA	THO
	𑂕		𑂖			𑂔	𑂕	𑂖	𑂗	𑂘	𑂙	10
JHA	TA	THA	DA	DHA	NA	NI	TO	TI	THA	DE	DAU	DHA
𑂔	𑂔	𑂕	𑂖	𑂗	𑂔	𑂕	𑂖	𑂗	𑂘	𑂙	𑂚	𑂛
JHA	NA	TA	THA	DA	DHA	NE	TE	THA	DA	DHA	NA	NI
𑂔	𑂕	𑂖	𑂗	𑂘	𑂙	𑂚	𑂛	𑂜	𑂝	𑂞	𑂟	𑂠
												12

7. Tusam rock inscription, early 6th century A.D.
 8. Nirmand plate of Samudrasena, early 7th century A.D.
 9. Early Chamba inscriptions, 7th century A.D.
- MANUSCRIPT STYLE
10. Turfan MS. of Kalpanāmanditikā, early 5th century A.D.
 11. Bower MS., early 6th century A.D.
 12. Horiuzi palm-leaf MS., early 8th century A.D.

MATHURA AND THE NORTH WEST REGION

	PŪ	PHA	BA	BHA	MI	MA	YA	RĀ	LA	LA	VI	SU	SHA									
1	५			१	४, ५	५	१	५			४	५	५									
	PU	PAU	PHA	BA	BHĀ	BHĪ	MĀ	MI	YA	RA	LĀ	LI	VI	SŌ	SHĀ							
2	५, ५	५	५	५	१, १	५, ५	५, ५	५, ५	५	५	५	५	५	५	५							
	PO			BĀ	BHĪ	BHŪ	MU	MŪ	YE	RĀ	LI		VI	SĪ								
3	५			५	१, ५	५, ५	५	५	५	५	५		५	५								
	PU	PĀ	PHĀ	BA	BU	BHĪ	BHŪ	MĀ	YĀ	YO	RI	LO	VAH	VI	SRI	SHA						
4	५, ५	५	५	५	५	१, १	५	५, ५	५	५	५	५	५	५	५	५						
	PA	PU		BU	BRI	BHĪ		MĀ			RO		VA	SŪ	SĪ							
5	५, ५			५, ५	५	५	५	५			५		५	५, ५								
	PĀ	PO		BU	BHĪ	MAU		YĀ	RĀ	LE	LI		VA	SĪ	SŪ	SHĀ						
6	५, ५			५	१	५	५	५	५	५, ५			५, ५	५, ५	५	५						
	PU				BHĪ	ME		YA	YO	RU	LA	LI	VI	SĀ	SHĀ							
7	५				१	५	५, ५	५	५	५	५	५	५	५	५	५						
	PĀ	PHA			BHĪ	BHŪ	MU	MI	YŪ	YA	RU	RO	LO	VA	SĪ	SHE						
8	५	५			१, ५	५, ५	५, ५	५	५, ५	५	५	५	५	५	५	५						
	PĀ	PU					MO	MA	YĀ	YA	RO	LA		VA	VE	SĪ	SRI	SHĪ	SHĀ			
9	५, ५				५, ५	५	५	५	५	५	५	५	५	५	५	५	५	५	५			
	PŪ	PAU	PHA	BĀ	BHU	BHŪ	MĀ	ME	YĀ	YE	RU	RŪ	LĀ	LE	LĀ	LI	VI	VĪ	SŌ	SŪ	SHU	SHAU
10	५, ५	५	५	५	५	५	५	५	५	५	५	५	५	५	५	५	५	५	५	५	५	५
	PĀ	PĪ	PHA	BA	BHA	BHŪ	MŪ	MA	YAI	YO	RU	RŪ	LĀ	LO			VI	VĪ	SĀ	SŪ	SHA	
11	५, ५	५	५	५	५	५	५	५	५	५	५	५	५	५	५	५	५	५	५	५	५	५
	PU	PŪ	PHA	BĀ	BHA		MA		YA		RA	KŪ	LO				VA	VĪ	SĀ	SŪ	SHA	
12	५, ५	५	५	५	५	५	५	५	५	५	५	५	५	५	५	५	५	५	५	५	५	५

*Form of *Va* is used for both *Va* and *Ba*

1. Mathura inscription of Chandra Gupta II, late 4th century A.D.
2. Mathura inscription of Kumāra Gupta I, early 5th century A.D.
3. Mehrauli iron pillar inscription of Chandra, early 5th century A.D.
4. Indor plate of Skanda Gupta, (G.E.) 146
5. Shorkot inscription, (Gupta) year 83
6. Kura inscription of Toramāna, late 5th century A.D.

SI	SE	HĀ	ŅGA	ŅCHA	ŅDA	ṬṬĀ	PTA	KLA	TRA	STHA	SYA	ŅYA	
𑖀, 𑖁	𑖂		-	-	-	𑖄	𑖅	𑖆	-		𑖈	𑖉	1
SAU	HĀ		ŅCHA	ŅDA	ṬṬĀ	JŅĀ	KSHA	STRI				JYAI	2
𑖉	𑖂		𑖊	𑖋	𑖌	𑖍	𑖎	𑖏				𑖑	
SRI	HĀ	ŅGE	ŅCHA	SHNO	RJJĪ	QGE	KSHI	KTRA	STHI	HLI	RYYĀ		3
𑖑	𑖂	𑖒	𑖊	𑖓	𑖔	𑖕	𑖖	𑖗	𑖘	𑖙	𑖚	𑖛	
SO	HU	ŅHĀ	DDHAM	SHNU	ŅTHA	CHCHHA	STU	TPRA	STHI	ŅYĀ	RYA		4
𑖜	𑖝	𑖞	𑖟	𑖠	𑖡	𑖢	𑖣	𑖤	𑖥	𑖦	𑖧	𑖨	
SO			DDHA		RDI	KLA	KSHU	STI	ṬṬHĀ		TYA		5
𑖩			𑖪		𑖫	𑖬	𑖭	𑖮	𑖯		𑖰		
SA	HA										SYA		6
𑖱, 𑖲	𑖳, 𑖴										𑖵		
SU		ŅGA	ŅDA	SHNU	RJJĪ	MBA	KSHYĀ	STRĀ	DDHYĀ	ŅYĀ	RYYĀ		7
𑖶		𑖷	𑖸	𑖹	𑖺	𑖻	𑖼	𑖽	𑖾	𑖿	𑗀	𑗁	
SA	HĀ	HĪ	ŅSĀ	ŅJA	ŅDA	RŅNĀ	CHCHHU	KSHMĪ	SĪRĪ	ṬṬHI	BRĀ	KHYĀ	8
𑗂	𑗃	𑗄	𑗅	𑗆	𑗇	𑗈	𑗉	𑗊	𑗋	𑗌	𑗍	𑗎	
SU	SĀ	HĀ	HI	ŅGA	ŅJA		SĪRĪ	CHCHHA	KSHA	ṬṬRA	HPA	TYA	9
𑗐	𑗑	𑗒	𑗓	𑗔	𑗕		𑗖	𑗗	𑗘	𑗙	𑗚	𑗛	
SRI	SAI	HĀ	HO	ŅNĀ	ŅCHA	JŅĀ	SHTHU	CHCHHRI	TPHU	HPHA	STHĀ	YĀN	10
𑗛	𑗜	𑗝	𑗞	𑗟	𑗠	𑗡	𑗢	𑗣	𑗤	𑗥	𑗦	𑗧	
SA	HI	HRI	KKRI	ŅJA	ŅDĀM	SHTHA	CHCHMĪ	KSHNO	HPA	HKHA	RĀT SHAK	ŅYĀ	11
𑗨	𑗩	𑗪	𑗫	𑗬	𑗭	𑗮	𑗯	𑗰	𑗱	𑗲	𑗳	𑗴	
SU	SŪ	HA			JŅĀ	RŅĀ	KV	SHNĪ	PRA	SHṬĀ	SHṬHA	VYA	12
𑗵	𑗶	𑗷			𑗸	𑗹	𑗺	𑗻	𑗼	𑗽	𑗾	𑗿	
SA													

7. Tusam rock inscription, early 6th century A.D.

8. Nirmand plate of Samudrasena, early 7th century A.D.

9. Early Chamba inscriptions, 7th century A.D.

MANUSCRIPT STYLE

10. Turfan MS. of Kalpanāmanditikā, early 5th century A.D.

11. Bower MS., early 6th century A.D.

12. Horiuzi palm-leaf MS., early 8th century A.D.

CENTRAL INDIA AND RAJASTHAN

	Ā	1	U	E	O	KU	KRI	KHE	GU	GO	GHA	CHI	CHHA	JĪ			
1	ॠ		ॡ			ॢ.ॣ	।	॥.०				१		२			
	A	1		E	AU	KĀ	KŪ	KHA	GĪ	GHO	GHRĪ	CHĪ		JĀ			
2	ॠ	ॡ		ॢ	ॣ	।.॥	०.ॢ	१	ॡ.ॣ			१		ॢ			
	A	Ā	1	U	E	KU	KRI	KHĀ	GRI	GU	GHĀ	CHĪ	JĀ	JĪ			
3	ॠ.ॠ	ॡ	ॢ	ॣ		ॢ.ॣ	।	॥.०	ॡ	ॢ		१	ॢ.ॣ	ॣ			
	A	Ā	1			KE		GRI	GU		CHA		JE				
4	ॠ.ॠ	ॡ				ॢ		१.१			ॣ		ॢ				
	A	1		E		KĪ	KĀ		GRI	GO	GHU	GHŪ	CHA	JĪ			
5	ॠ	ॡ		ॢ		ॢ.ॣ			१.१	ॡ.ॣ	ॣ		ॣ	ॢ			
	A		U			KĪ	KU	KHE	GO	GHO	CHE		JA				
6	ॠ	-	ॢ			ॢ.ॣ	।	॥	ॠ	ॡ	ॣ		E				
	A	Ā	1	U	E	AU	KĪ	KŪ	KHĀ	GĀ	GU	CHE	GHI	CHA	CHŪ	JĀU	JŌ
7	ॠ.ॠ	ॡ	ॢ.ॣ	ॣ	ॣ	ॣ	ॢ.ॣ	।	॥.०	ॡ.ॣ	ॣ.ॣ	ॣ.ॣ	ॣ.ॣ	ॣ.ॣ	ॣ.ॣ	ॣ.ॣ	ॣ.ॣ
	A			E		KAI	VA	KHA	GĪ	GU		CHA		JA			
8	ॠ	-		ॢ		ॢ.ॣ	ॣ	॥.१			ॣ		ॣ		ॣ		
	A	1	U			KĀ	KĀ	KHO	KHA	GO	GHĀ	CHĪ		JA			
9	ॠ	ॢ.ॣ	ॣ			ॢ.ॣ	ॣ	॥.०	ॠ	ॡ	ॣ	ॢ		ॣ			
	A	1	U	E		KĀU	KHĀ	GĪ	GAH	GHAI	CHI	CHŪ		JŪ			
10	ॠ	ॢ	ॣ	ॣ		ॢ	ॣ	१.१	ॣ	ॣ	ॣ	ॣ		ॣ			
	A	Ā	1	U		KĀ	KHĀ		GO	GHA	CHAI			JA			
11	ॠ.ॠ	ॡ	ॢ			ॣ	ॣ	१	ॡ	ॣ	ॣ			ॣ			
	Ā	1	U			KĀ	KU	KHI	GA					JA			
12	ॠ	ॢ	ॣ			ॣ.ॣ	ॣ	ॢ	१					ॣ			

1. Udayagiri cave inscription, (Gupta) year 106
2. Bihar Kotra inscription of Naravarman, (Vikrama) year 474
Gangdhar inscription of Viśvavarman, (Vikrama) year 480
3. Sanchi inscription, (Gupta) year 131
Mandsor inscription of Govinda Gupta, (Vikrama) year 524
Mandsor inscription of Kumāra Gupta and Bandhuvarman, (Vikrama) year 529
4. Eran pillar inscription of Budha Gupta, (Gupta) year 165
5. Eran boar inscription of Toramāṇa, early 6th century A.D.
6. Gwalior inscription of Mihirakula, early 6th century A.D.

JHA	NA	TO	THA	DA	DHA	NĀ	TĀ	TO	THA	DI	DHĪ	NRI	NĀM				
		८	-	-	-	ॡ	ॠ. ॡ	०	३	३	३	३. ३		1			
	TE TĀ			DA		NA	TAI	TO	THĀ	DĪ	DU	DHAI	NĪ	2			
	८. ८			८		ॠ	ॠ. ॠ	०	३	३. ३	३	३	३				
	TO			DI	DHAM	NAI	NĀ	TĪ	TU	THI	DĀ	DU	DHE	DHU	NRI	NAI	3
	८			३	३	ॠ. ॠ	ॠ. ॠ	ॠ. ॠ	ॠ	ॠ	३. ३	३. ३	३. ३	३. ३	३. ३	३. ३	
				DA	DHA	NĀM	TI	TU	THI	DI	DHI	DHĪ	NU				4
				३	३	ॡ	ॠ. ॠ	ॠ	ॠ	३	३. ३	३. ३	३				
						NĀ	TU	TAU	THI	THU	DI	DE	DHI	DHĀ	NĀIH		5
						ॡ	ॠ. ॠ	ॠ. ॠ	ॠ. ॠ	ॠ. ॠ	ॠ. ॠ	ॠ. ॠ	ॠ. ॠ	ॠ. ॠ	ॠ. ॠ	ॠ. ॠ	
TA	TĀ					NA	TO	TU	THI	DĪ	DO	DHĀ	NE				6
८. ८						ॡ. ॠ	ॠ. ॠ	ॠ	ॠ	३. ३	३. ३	३. ३	३				
IA	THI	DI	DHA	NO	TI	TRI	THU	THĪ	DŪ	DO	DHI	DHĀ	NI	NO			7
८	ॠ	३	३	ॡ	ॠ	ॠ. ॠ	ॠ. ॠ	ॠ. ॠ	ॠ. ॠ	ॠ. ॠ	ॠ. ॠ	ॠ. ॠ	ॠ. ॠ	ॠ. ॠ	ॠ. ॠ	ॠ. ॠ	
TĀ			DHA	NĀ	TI	TU	THI	DA	DHA	DHĀ	NJ						8
ॢ			ॢ	ॡ	ॠ	ॠ. ॠ	ॠ	ॢ	ॢ	ॢ	ॢ	ॢ	ॢ	ॢ	ॢ	ॢ	
TA		DA		NĀ	TA	THĀ	DO	DHI	NAI	NJ							9
८		३		ॡ	ॠ	ॢ	ॢ	ॢ	ॢ	ॢ	ॢ	ॢ	ॢ	ॢ	ॢ	ॢ	
TĀ	TO		DA	NO	TA	THA	DĪ	DAI	DHŪ	NU	NI						10
ॢ. ॢ			ॢ	ॡ	ॠ	ॢ	ॢ	ॢ	ॢ	ॢ	ॢ	ॢ	ॢ	ॢ	ॢ	ॢ	
					TĪ		DE	DU	DHĀ	NU	NE						11
					ॠ		ॢ. ॢ	ॢ	ॢ	ॢ	ॢ	ॢ	ॢ	ॢ	ॢ	ॢ	
TĀ					TĀ	THA	DĪ		NAU								12
ॢ					ॠ	ॢ	ॢ		ॢ								

7. Mandsor inscription of Yaśodharman, (Vikrama) year 589
8. Vasantagadh inscription of Varmalāta, (Vikrama) year 682
9. Nagda inscription of Aparājita, (Vikrama) year 718
- Jhalrapatan inscription of Durgāṇa, (Vikrama) year 746
10. Kanaswa inscription of Śivagaṇa, (Vikrama) year 795
11. Buchkala inscription of Nāgabhaṭa, (Vikrama) year 872
12. Barah copper plate of Bhojadeva, (Vikrama) year 893

CENTRAL INDIA AND RAJASTHAN

	PĀ	PHA	BA	BHŪ	MĀ	MU	YU	YĀ	RŪ	RAI	LO	LA	VI	SŪ	SHO			
1	प	-	□	भ, भू, भु, भ, भू	म, मू, मु, य, यू	य, र, रा, ल, लू	र, ल, लू	र, ल, लू	र, ल, लू	र, ल, लू	र, ल, लू	र, ल, लू	र, ल, लू	र, ल, लू	र, ल, लू			
	PĀ		BA	BHŪ	BHŪ	MĀ	MU	YŪ	YO	RO	LĀ	LO	VĪ	SŌ	SHA			
2	प	-	□	भ, भू, भु, भ, भू	म, मू, मु, य, यू	य, र, रा, ल, लू	र, ल, लू	र, ल, लू	र, ल, लू	र, ल, लू	र, ल, लू	र, ल, लू	र, ल, लू	र, ल, लू	र, ल, लू			
	PĀ	PI	PHU	BU	BŪ	BHŪ	MU	MAI	YĀ	YO	RI	RĀ	LI	LO	VĪ	SŪ	SĀU	SHĀ
3	प, पि	पु	भ, भू	भ, भू	भ, भू	भ, भू	भ, भू	भ, भू	भ, भू	भ, भू	भ, भू	भ, भू	भ, भू	भ, भू	भ, भू	भ, भू	भ, भू	भ, भू
	PŪ	PĀ		BU	BHŪ	MĀ		YO	RO	LI	LO		VI	VRI	SĀ	SHĀ		
4	प, पु	-	प	भ	भू	म		य	र	ल	लू		र, ल, लू	र, ल, लू	र, ल, लू	र, ल, लू	र, ल, लू	र, ल, लू
	PŪ	PAU	PHĀ	BRĀ	BHĀ	MŪ		YE	RĀ	RU	LO		VO	SĀ	SHA			
5	प, पु	पु	भ	भू	भू	भू	भू	भू	भू	भू	भू	भू	भू	भू	भू	भू	भू	भू
	PRĪ				BHŪ	MA		YO	RĪ	LĀI			VO	SŪ	SHE			
6	पु	-	-	भ	भू	म		य	र	ल	लू		र, ल, लू	र, ल, लू	र, ल, लू	र, ल, लू	र, ल, लू	र, ल, लू
	PĀ	PI	PHA	BI	BHĀ	BHŪ	MŪ	MU	YO	RI	RU	LO	VI	SŌ	SHU			
7	प, पि	पु	भ	भू	भू	भू	भू	भू	भू	भू	भू	भू	भू	भू	भू	भू	भू	भू
	PĀ	PHA	BA	BHŪ	MI	MU		YĀ	RŪ	LE	LI		VĪ	SĀ	SĪ	SHA		
8	प	पु	□	भ	भू	म		य	र	ल	लू		र, ल, लू	र, ल, लू	र, ल, लू	र, ल, लू	र, ल, लू	र, ल, लू
	PĀ		BA	BHŪ	MA	YA		RU	RA	LĪ			VRI	SĀU	SHA			
9	प	-	□	भ	भू	म		य	र	ल	लू		र, ल, लू	र, ल, लू	र, ल, लू	र, ल, लू	र, ल, लू	र, ल, लू
	PĀ	PI	PHĀ		BHŪ	MU	MŪ	YI	RU	RI	LAU	LĪ	VĀ	VE	SĪ	SHA		
10	प, पि	पु	भ	भू	भू	भू	भू	भू	भू	भू	भू	भू	भू	भू	भू	भू	भू	भू
	PĀ	PU		BA	BHŪ	ME		YE	RĀ	RO	LĪ		VE	SŪ	SHA			
11	प, पु	-	□	भ	भू	म		य	र	ल	लू		र, ल, लू	र, ल, लू	र, ल, लू	र, ल, लू	र, ल, लू	र, ल, लू
	PU				BHŪ	BHO	MĀ	YI	RĪ	LĀ			VĀ	SĀ	SHA			
12	पु	-	-	भ	भू	म		य	र	ल	लू		र, ल, लू	र, ल, लू	र, ल, लू	र, ल, लू	र, ल, लू	र, ल, लू

1. Udayagiri cave inscription, (Gupta) year 106.
2. Bihar Kotra inscription of Naravarman, (Vikrama) year 474 }
Gandhar inscription of Viśvavarman, (Vikrama) year 480 }
3. Sanchi inscription, (Gupta) year 131
Mandsor inscription of Govinda Gupta, (Vikrama) year 524
Mandsor inscription of Kumāra Gupta and Bandhuvarman, (Vikrama) year 529 }
4. Eran pillar inscription of Budha Gupta, (Gupta) year 165
5. Eran boar inscription of Toramāṇa, early 6th century A.D.
6. Gwalior inscription of Mihirakula, early 6th century A.D.

SU	SŪ	HĀ	HU	ŅGHI	JŅI	STHI	GHNA	STU	SPHA	DBHI	SRI	KSHA	NYA	1
सु	सू	हा	हु	ङ्घि	ज्झि	स्थि	घ्ना	स्तु	स्फा	दभि	स्रि	क्ष	न्य	
SU		HI		ŅGO	ŅCHA	STHĀ	SHIVĀ	RŅHA	HKHA	NDĀI	PRA	KSHA	TTYĀ	2
सु		हि		ङ्गो	ञ्च	स्था	शिव	रन्हा	ह्क्ख	न्दा	प्रा	क्ष	त्त्या	
SU	SRI	HRI		ŅJA	JŅĀ	RTTHI	SHĀ	LLA	SPHU	NDĀ	HPĀ	HKSHA	BHYU	3
सु	स्रि	ह्रि		ञ्ज	ज्झा	रत्थि	शा	ल्ला	स्फु	न्दा	ह्पा	ह्क्ख	भ्यु	
SU		HE		ŅKA	ŅCHA	STHI	SHYĀ	RŅHA	TPA	CHCHHA	SRI		RYĀ	4
सु		हे		ङ्का	ञ्च	स्थि	श्या	रन्हा	त्पा	चच्च्हा	स्रि		र्या	
SA		HĪ				RTHA		SHNO	LCU	RTTAU	STRAI	KSHMYĀ	NYU	5
स		हि				रथा		शन्	ल्लु	रत्तौ	स्त्रै	क्ष्म्या	न्यु	
SĀ		HE		ŅGO				STU	YAN		HPA	RYĀ	KHYĀ	6
सा		हे		ङ्गो				स्तु	यान		ह्पा	र्या	क्ष्या	
SŪ		HĀ		ŅSU	JŅAH	STHI	SHĀ	NDĀ	ŚVAM	CHCHHRI	SKRI	TKSHI	RYĀ	7
सू		हा		ङ्सु	ज्झह	स्थि	शा	न्दा	स्वम	चच्च्ह्रि	स्क्री	त्क्षि	र्या	
SŪ		HĀ		ŅGA		STHĀ	HMA	NDĀ		BRA	HPA	KHYA	RYĀ	8
सू		हा		ङ्गा		स्था	ह्मा	न्दा		ब्रा	ह्पा	क्ष्या	र्या	
SI		HAI				STHĀ		NTHA	DDHA	GRA	SRI		KSHYĀ	9
सि		है				स्था		न्था	दध	ग्र	स्रि		क्ष्या	
SĀ		HE		ŅGA	JŅĀ	STHAI	SHĀH	NTHA	SPHŪ	CHCHHI	RJJA	KSHA	GHYĀ	10
सा		हे		ङ्गा	ज्झा	स्थै	शह	न्था	स्फु	चच्च्हि	रज्ज	क्ष	ग्या	
SI		HĀ		ŅGA			ŚVA	TTĀ			SRI		MYĀM	11
सि		हा		ङ्गा			स्व	त्ता			स्रि		म्याम	
SI	SU	HO		NDĀ	ŅCHI	JŅĀ	HMA	SHĀ	TPĀ	SRI	HPĀ	KSHI	DH YĀ	12
सि	सु	हो		न्दा	ञ्चि	ज्झा	ह्मा	शा	त्पा	स्रि	ह्पा	क्षि	ध्या	

7. Mandsor inscription of Yaśodharman, (Vikrama) year 589
8. Vasantagadh inscription of Varmalāta, (Vikrama) year 682
9. Nagda inscription of Aparājita, (Vikrama) year 718
Jhalrapatan inscription of Durgana, (Vikrama) year 746
10. Kanaswa inscription of Śivagaṇa, (Vikrama) year 795
11. Buchkala inscription of Nāgabhaṭa, (Vikrama) year 872
12. Barah copper plate of Bhojadeva, (Vikrama) year 893

KATHIAWAD AND CENTRAL INDIA

KATHIAWAD

	A	Ā	I	U	E	O	KĀ	KE	KHĀ	GU	GHA	CHAI	CHHA	JĀ	JĪ
1	𑀧, 𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧
2	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧
3	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧
4	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧
5	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧

CENTRAL INDIA

	A	Ā	I	U	E	O	KĀ	KU	KHĀ	GU	GHA	CHAI	CHHA	JĀ	JĪ
6	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧
7	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧
8	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧
9	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧
10	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧
11	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧
12	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧

1. Junagadh inscription of Skanda Gupta, (Gupta) years 136-137
2. Maitraka inscription, early 6th century A.D.
3. Maitraka inscription, late 6th century A.D.
4. Maitraka inscription, early 7th century A.D.
5. Maitraka inscription, late 7th century A.D.
6. Poona plate of Prabhāvatī Guptā, 5th century A.D.

JHA	NĀ	TI	THA	DI	DHA	NĀ	TA	TU	THI	THA	DA	DHĀ	NĪ	1	
	१	२		३	४	५	६	७	८	९	१०	११	१२		
	TA TĀ			DĀ	DHI	NĪ	NA	TO	TU	THĀ	THA	DĀ	DĪ	2	
	१३			१४	१५	१६	१७	१८	१९	२०	२१	२२	२३		
JHA	TĀ	THO	DĀ	DHA	NĪ	TO	THA	DI	DHI	NU	NĀ			3	
P	२४	२५	२६	२७	२८	२९	३०	३१	३२	३३	३४	३५	३६		
	TĀ		DĀ	DHA	NA	TA	THA	DA	DHĀ					4	
	३७		३८	३९	४०	४१	४२	४३	४४	४५	४६	४७	४८		
	TĀ	THO	DĀ	DHA	NĪ	NĀ	TĀ	TU	THA	DĀ	DHĀ	NU	NĀ	5	
	४९	५०	५१	५२	५३	५४	५५	५६	५७	५८	५९	६०	६१		
	TO					NA	TĀ	THI	DU	DHA	DHĀ	NRI	NE	6	
	६२					६३	६४	६५	६६	६७	६८	६९	७०		
	TA			DHA	NĀ	NĪ	TI	TE	THU	THĀ	DE	DHI	DHĀ	7	
	७१			७२	७३	७४	७५	७६	७७	७८	७९	८०	८१		
	TĀ	THA	DHA	NA	TU	TI	THĀ	DE	DĪ	DHI	NRI	NU		8	
	८२	८३	८४	८५	८६	८७	८८	८९	९०	९१	९२	९३	९४		
JHA	TU		DU	DHA	NĪ	NAI	TO	TE	THĀ	THAI	DŪ	DĪ	DHĀ	9	
P	९५		९६	९७	९८	९९	१००	१०१	१०२	१०३	१०४	१०५	१०६		
	TA		DĀ		NA	TU	TI		DA	DHĀ	NE	NU		10	
	१०७		१०८	१०९	११०	१११	११२	११३	११४	११५	११६	११७	११८		
	TĀ				NA	TI			DU	DĪ	DHI	NĀ		11	
	११९				१२०	१२१			१२२	१२३	१२४	१२५	१२६		
TĀ	TE	THA	DA		NA	NE	TAU	TI	THI	THĀ	DI	DHĀ	DHU	NĀ	12
१२७	१२८	१२९	१३०	१३१	१३२	१३३	१३४	१३५	१३६	१३७	१३८	१३९	१४०	१४१	

7. Majhgawan plates of Mahārāya Hastin, (Gupta) year 191
8. Parivrājaka and Uchchhakalpa inscription, late 5th century A.D.
9. Parivrājaka and Uchchhakalpa inscription, early 6th century A.D.
10. Arang plates of Bhīmasena II, (Gupta) year 282
11. Tiwarkheda plates of Nannarāja, Śaka year 553
12. Samangada plates, Śaka 675 and Paithani plates, Śaka 716

KATHIAWAD AND CENTRAL INDIA

KATHIAWAD

	PĪ	PU	PHA	BU	BHŪ	MŪ	MA	YO	RĀ	LĀ	LO	LA	VĀ	VĪ	SA	SHU
1	𑀧, 𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧
	PĀ	PŪ	PHA*	BA	BO	BHŪ	BHĪ	MĀ	MAU	YU	YĪ	RU	RA	LĪ	LA	SHA
2	𑀧, 𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧
	PŪ	PHA		BO	BHŪ	ME	MAU	YA	RĀ	LĪ	LĀ		VI	SĪ	SHI	
3	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧
	PA	PHA				BHA	MA	YI	RŪ	LA			VA	SĀ	SHAH	
4	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧
	PĀ	PĪ	PHA	BĀ	BU	BHO	BHŪ	MĀ	MAU	YA	YŪ	RE	RU	LĀ	LAU	SHA
5	𑀧, 𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧

CENTRAL INDIA

	PU		BA	BHĀ	MA	YU	RĀ	LĀ	LA	VA	VĀ	SĀ	SHA			
6	𑀧, 𑀧	-	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	-	𑀧, 𑀧	𑀧	-				
	PĪ	PAU	PHA	BRA	BHŪ	MĀ	MA	YA	YO	RE	RU	LĀ	SHA			
7	𑀧, 𑀧	𑀧	𑀧	𑀧	𑀧	𑀧, 𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧			
	PĀ	PŪ	PHA	BA	BRA	BHŪ	BHŪ	MO	MA	YA	YŪ	RĀ	RU	LO	LĪ	SHA
8	𑀧, 𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧
	PĪ	PU	PHU	BO		BHŪ	MO	MA	YO	YŪ	RE	RŪ	LI	LĪ		SHĀ
9	𑀧, 𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧
	PAU			BA	BHĪ	BHŪ	MA	YO	RA	LA			VI	VAI	SŪ	SHA
10	𑀧	-	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧
	PĀ	PU				*BHŪ	MĀ	VE	YO	RĀ	LA		VI*	VE*	SĀ	SHA
11	𑀧, 𑀧	𑀧	-	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧
	PŪ	PA	PHA			BHĪ	BHŪ	MU	MŪ	VE	YĀ	RA	RAI	LO		SHA SHU
12	𑀧, 𑀧	𑀧, 𑀧	-	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧

* Used for both *Va* and *Ba*

1. Junagadh inscription of Skanda Gupta, (Gupta) years 136-137
2. Maitraka inscription, early 6th century A.D.
3. Maitraka inscription, late 6th century A.D.
4. Maitraka inscription, early 7th century A.D.
5. Maitraka inscription, late 7th century A.D.
6. Poona plate of Prabhavati Gupta, 5th century A.D.

PLATE XIVb

SA	HĀ	NSĀ		JÑĀ	NDĀ	TPHĀ	CHCHHA	SHNU	RTTHĀ	KSHMYĀ	BHYĀM	1	
𑀭	𑀅	𑀆	-	𑀅	𑀆	𑀇	𑀈	𑀉	𑀊	𑀋	𑀌		
SU	HĀ	NGI	ÑCHA	JÑĀ	NDĀ	HKU	HPA	RNNA	STHĀ	TRU	DHYĀ	2	
𑀭	𑀅	𑀆	𑀇	𑀅	𑀆	𑀇	𑀈	𑀉	𑀊	𑀋	𑀌		
SA	HU	HRI								KRI	SYĀ	3	
𑀭	𑀅	𑀆								𑀇	𑀈		
SA	HĀ											4	
𑀭	𑀅												
SA	HU	HRI	ÑKĀ	T	JÑĀ	NDĀ	SPHO	CHCHHI	TRĀ	STHAI	KSHĀ	MYA	5
𑀭	𑀅	𑀆	𑀇	𑀈	𑀅	𑀆	𑀇	𑀈	𑀉	𑀊	𑀋	𑀌	
SĪ	HĀ		MRĀT							¹ STHĀ	SRI	VYĀ	6
𑀭	𑀅		𑀇							𑀊	𑀋	𑀌	
SRI	HU	HĪ	NGA	NHO	JÑĀ	NDĀ	KKRI	CHCHHE	DHYA	SHTHI	GRĀ	RYĀ	7
𑀭	𑀅	𑀆	𑀇	𑀈	𑀅	𑀆	𑀇	𑀈	𑀉	𑀊	𑀋	𑀌	
SU	SRI	HĀ	NGA	ÑCHA	JÑĀ	NDĀ	JJHI	KJJI	LPĀ	RTHA	BRĀ	SHTYU	8
𑀭	𑀭	𑀅	𑀆	𑀇	𑀅	𑀆	𑀇	𑀈	𑀉	𑀊	𑀋	𑀌	
SRI	HĀ	NGA	ÑCHA	STHĀ	CHCHHE	JJA	HPA	LGU	SHTA	TTRI	NYĀ		9
𑀭	𑀅	𑀆	𑀇	𑀈	𑀉	𑀇	𑀈	𑀉	𑀊	𑀋	𑀌		
SU	SE	HĀ	HA	ÑCHA	JÑĀ	NDĀ	CHCHHE		DRĀ	SRI	SYA		10
𑀭	𑀭	𑀅	𑀆	𑀇	𑀅	𑀆	𑀇		𑀈	𑀋	𑀌		
SI	HI	ÑJA	ÑCHA	STHI	NDĀ	TTĀ	CHCHHA	RNNE	KSHĪ	SRI			11
𑀭	𑀭	𑀇	𑀇	𑀈	𑀇	𑀇	𑀈	𑀉	𑀊	𑀋			
SU	SĪ	HA	JÑĀ	ÑCHA	JÑĀ	NDĀ	TTĀ	STHI	STHĀ	KSHMĀ	SRI	VYĀ	12
𑀭	𑀭	𑀅	𑀆	𑀇	𑀅	𑀆	𑀇	𑀈	𑀉	𑀊	𑀋	𑀌	

1 The form of dental *Sa* is used for cerebral *Sha*

7. Majhgawan plates of Mahārāya Hastin, (Gupta) year 191
8. Parivrājaka and Uchchhakalpa inscription, late 5th century A.D.
9. Parivrājaka of Uchchhakalpa inscription, early 6th century A.D.
10. Arang plates of Bhīmasena II, (Gupta) year 282
11. Tiwarkheda plates of Nannarāja, Śaka year 553
12. Samangada plates, Śaka 675 and Paithan plates, Śaka 716

EASTERN MALWA AND DECCAN

	Ā	I	U	E	O	KĀ	KU	KHA	GU	GHA	CHA	CHHA	JĀ
1	𑀓	-	-	-	-	𑀓, 𑀔	𑀕	𑀖	𑀗	𑀘	𑀙	𑀚	𑀛
						KRI	KAU	KHĀ	GU	GHA	CHĀ	CHĪ	JA
2						𑀓, 𑀔	𑀕	𑀖	𑀗	𑀘	𑀙	𑀚	E
	A	Ā	I	Ī		KRI	KU	KHĀ	GU	GAU	CHE	CHA	JO
3	𑀓, 𑀔	𑀕	𑀖	𑀗		𑀓	𑀔	𑀕	𑀖	𑀗	𑀘	𑀙	𑀚, 𑀛
	A	Ā	I	Ī	U	E							JĪ
4	𑀓, 𑀔	𑀕	𑀖	𑀗	𑀘	𑀙	𑀚	𑀛	𑀜	𑀝	𑀞	𑀟	𑀠
	A	Ā	I	Ī	U	E							JA
5	𑀓, 𑀔	𑀕	𑀖	𑀗	𑀘	𑀙	𑀚	𑀛	𑀜	𑀝	𑀞	𑀟	E, 𑀠
	A	Ā	I	Ī	U	E							JA
6	𑀓, 𑀔	𑀕	𑀖	𑀗	𑀘	𑀙	𑀚	𑀛	𑀜	𑀝	𑀞	𑀟	E
	A	Ā	I	Ī	U	E							JA
7	𑀓, 𑀔	𑀕	𑀖	𑀗	𑀘	𑀙	𑀚	𑀛	𑀜	𑀝	𑀞	𑀟	E, E
	A	Ā	I	Ī	U	E							JA
8	𑀓, 𑀔	𑀕	𑀖	𑀗	𑀘	𑀙	𑀚	𑀛	𑀜	𑀝	𑀞	𑀟	𑀠
	A	Ā	I	Ī	U	E							JA
9	𑀓, 𑀔	𑀕	𑀖	𑀗	𑀘	𑀙	𑀚	𑀛	𑀜	𑀝	𑀞	𑀟	E
	A	Ā	I	Ī	U	E							JA
10	𑀓	-	𑀕	𑀖	𑀗	𑀘	𑀙	𑀚	𑀛	𑀜	𑀝	𑀞	𑀟
	A	Ā			E								JA
11	𑀓, 𑀔	-	-	𑀕	-	𑀓, 𑀔	𑀕	𑀖	𑀗	𑀘	𑀙	𑀚	𑀛
	A	Ā	I	Ī	U	E							JA
12	𑀓, 𑀔	𑀕	𑀖	𑀗	𑀘	𑀙	𑀚	𑀛	𑀜	𑀝	𑀞	𑀟	𑀠
	A	Ā	I	Ī	U	E							JA

1. Gupta inscriptions from Eastern Malwa, late 4th century A.D.
2. Bilsad Stone inscription of Kumāra Gupta I, (Gupta) year 96
3. Eastern Malwa variety, 5th century A.D.
4. Vākāṭaka inscriptions, 4th-5th century A.D.
5. Vākāṭaka inscriptions, 5th century A.D.
6. Inscriptions of Śarabhapura Kings, 6th-7th century A.D.

PLATE XVa

JHA	NA	TA	THA	DA	DHA	NO	TU	TO	THU	DĀ	DI	DHI	NRI	NĪ			
					𑌕	𑌕	𑌕	𑌕	𑌕	𑌕	𑌕	𑌕	𑌕	𑌕	1		
	TI					NĀ	MI	TE	TI	THĀ	DI	DHĀ	DHI	NU			
	𑌕					𑌕	𑌕	𑌕	𑌕	𑌕	𑌕	𑌕	𑌕	𑌕	2		
	TO			DA		NĀ	NO	TU	TO	THE	DĪ	DHE	NU	NĪ			
	𑌕			𑌕		𑌕	𑌕	𑌕	𑌕	𑌕	𑌕	𑌕	𑌕	𑌕	3		
	TA			DA		NĀ	TI	TU	THA	DRI	DAU	DHI	NĀ	NO			
	𑌕, 𑌕			𑌕		𑌕	𑌕	𑌕	𑌕	𑌕	𑌕	𑌕	𑌕	𑌕	4		
JHA	TA			DA		NĀ	TI	TU	THI	THU	DRI	DAU	DHA	NRI	NO		
𑌕	𑌕			𑌕		𑌕	𑌕	𑌕	𑌕	𑌕	𑌕	𑌕	𑌕	𑌕	5		
	TU					NĪ	TA	TU	THĀ	THO	DI	DHO	NU	NĪ			
	𑌕					𑌕	𑌕	𑌕	𑌕	𑌕	𑌕	𑌕	𑌕	𑌕	6		
	TU					NĀ	TI	THĀ	DU	DĪ	DHA	NO					
	𑌕					𑌕	𑌕	𑌕	𑌕	𑌕	𑌕	𑌕	𑌕	𑌕	7		
	TA			DA	DHA	NĀ	TAI	TĪ	THA	THAU	DI	DRI	DHĀ	DHAU	NU	NĪ	
	𑌕			𑌕	𑌕	𑌕	𑌕	𑌕	𑌕	𑌕	𑌕	𑌕	𑌕	𑌕	𑌕	8	
						NĀ	TU	THĀ	DI	DHI	NU	NA					
						𑌕	𑌕	𑌕	𑌕	𑌕	𑌕	𑌕	𑌕	𑌕	𑌕	9	
						NA	NE	TĀ	TO	THA	THĀ	DE	DA	DHE	DHĀ	NO	NAI
						𑌕	𑌕	𑌕	𑌕	𑌕	𑌕	𑌕	𑌕	𑌕	𑌕	𑌕	10
	TA					NE	TU					DAI	DHĀ	NU	NE		
	𑌕					𑌕	𑌕	𑌕				𑌕	𑌕	𑌕	𑌕	11	
	TU			DĀ		NE	NĀ	TI	TO	THĀ	DI	DU	DHĀ	NRI	NĪ		
	𑌕			𑌕		𑌕	𑌕	𑌕	𑌕	𑌕	𑌕	𑌕	𑌕	𑌕	𑌕	12	

- Pipardula plate of Narendra of Śarabhapura, 7th century A.D.
- Kadamba inscriptions, 5th century A.D.
- Yekkeri inscriptions of the time of Pulekeśin II, early 7th century A.D.
- Pallava inscriptions, 6th century A.D.
- Inscriptions of the Madharas, 5th century A.D.
- Inscriptions of the Gaṅgas, between A.D. 575 and 680

EASTERN MALWA AND DECCAN

	PRI PAU PHA	EA	BHŪ	MĀ	YE	RĀ	RI	LA	LA	VĪ	VO	SU
1	पु.पू		व	ह	अ.अ	य	र.रि	ल		वि	व	स
	PŪ		BE	BHĪ	ME	YI	RĀ	LĪ		VO	SŪ	
2	पू		वे	हि	मे	यि	रा	लि		वो	सू	
	PU PŪ PHA	BU	BHŪ	MĀ	ME YĀ	YO	RI RU	LE	LO	VĪ	SĀ	SĪ
3	पु.पू	व	व	ह	अ.अ	य.य	र.रि	ल.ल	लो	वि	स	सि
	PU		BRI	BHA BHAI	MĀ ME	YĪ	RĀ RU	LĀ	LĪ	VI	VĪ	SĀ SĀU
4	पु		व्रि	भा भै	मा मे	यि	रा रु	ला	लि	वि	वि	सा सा
	PU	PHA	BRI BO	BHA BHAI	MO MŪ	YAH	RA		LĪ	VĀ	SĀ	
5	पु	व	व्रि	भा भै	मा मु	यः	र		लि	वा	सा	
	PŪ PRA	PHA	BRA	BHŪ	MO MĀ	YŪ	RĀ	LO	LĀ	VĪ	VRI	SĀ
6	पू.पू	व	व्रि	ह	भू	म	य	र	ल	वि	व्रि	सा
	PU		BO	BHO BHŪ	MO MĪ	YA	RE	LA		VĀ	VRI	SĀ
7	पु		व	भू	मि	य	र	ल		वा	व्रि	सा
	PŪ PAU	PHA	BĀ	BO BHU	BHŪ ME	MŪ	YO YĪ	RO RĪ	LO LŪ	LĀ	VAI	VA SŪ SĀ
8	पू.पू	व	व	भू	मे	मु	य	र	ल	वा	वा	सू सा
	PU PRA		BE	BHŪ	ME MĪ	YO	RU RĪ	LĀ		VAI	SĀ	
9	पु.पू		वे	भू	मि	य	र	ल		वा	सा	
	PU PAU	PHA	BĀ	BĀ	BHŪ	MĀ	MA YE	YU	RU	LAI	LO	LĀ
10	पू.पू	व	व	भू	मा	य	यु	रु	ल	वि	वि	सा
	PŪ PU	PHA	BRI	BHŪ	MĀ	ME YE	YU RĀ	RAU	LĀ	LO	VE	VA SĀ
11	पू.पू	व	व्रि	भू	मा	य	यु	र	ल	वा	वा	सा
	PO PAU	PHA	BO	BHŪ BHĪ	MĀ	YĀ	YU RŪ	RĪ	LĀ	LĪ	VĀ	VA SĀU
12	पू.पू	व	व	भू	मा	य	यु	र	ल	वा	वा	सा

1. Gupta inscriptions from Eastern Malwa, late 4th century A.D.
2. Bilsad Stone inscription of Kumāra Gupta I, (Gupta) year 96
3. Eastern Malwa variety, 5th century A.D.
4. Vākāṭaka inscriptions, 4th-5th century A.D.
5. Vākāṭaka inscriptions, 5th century A.D.
6. Inscriptions of Śarabhapura Kings, 6th-7th century A.D.

SHE	SU	HU	NKRA	RJJI	RTTHAM	SHNU	STHI	SHJI	DDHI	TTA	NDRA	DYAH	1
ச	சு	ஹு	ந்கர	ரஜி	ரத்தம்	சுநு	ஸ்தி	ஸ்தி	ஹி	தா	ந்ர	த்ய	
SE	HÄ	-	-	-	-	-	SPHA	CHCHHA	STU	RSHA	DHRU	KHYA	2
-	சே	ஹ	-	-	-	-	ஸ்பா	சுசுஹா	ஸ்து	ரஸா	த்ரு	க்ய	
SHÄ SHD SI SÜ	HA HE	NHAIH	JÄ	DDHAM	SHNA	RTTHI	SHTA	STU	SRU	SRI	RYA	3	
ச. ஷ சி சு	ஹ. ஹே	நஹி	ஜ	ஹம்	ஸநா	ரத்தி	ஸ்தா	ஸ்து	ஸு	ஸ்ரி	ர்ய		
SHE	SÜ	HE	NGA	-	-	-	SHTO	-	MRÄ	HPRA	NYA	4	
ச	சு	ஹே	ங	-	-	-	ஸ்து	-	ம்ர	ஹ்ப்ரா	ந்ய		
SHO	SÜ	HA	NGAU	JÄ	SHTAM	SHNU	CHCHHI	-	KRA	HPRA	SYA	5	
சு	சு	ஹ	ஙௌ	ஜ	ஸ்தம்	சுநு	சுசுஹி	-	க்ரா	ஹ்ப்ரா	ஸ்ய		
SHÄ SÜ SÄ	HU	NGHE	JÄ	NCHA	SHNA	RHNA	CHCHE	PRÄ	HKAU	HPA	NYA	6	
ச. ஷ சு ச	ஹு	ந்ஹே	ஜ	ந்சா	ஸநா	ர்ஹ	சுசுஹே	ப்ரா	ஹ்கௌ	ஹ்ப	ந்ய		
SHA	SI	HÄ	-	-	-	-	-	-	-	SRI	-	7	
சா	சி	ஹ	-	-	-	-	-	-	-	ஸ்ரி	-		
SHI	SI	SI	HI	HE	NGA	JÄ	NCHA	DDHAM	STHÄ	CHCHHA	HPRA	NKA	8
சி	சி	சி	ஹி	ஹே	ங	ஜ	ந்சா	ஹம்	ஸ்தா	சுசுஹா	ஹ்ப்ரா	ந்கா	
SHU	SÜ	HÄ	NSÄ	-	-	-	NCHA	DDHA	NÄ	SHTA	-	-	9
சு	சு	ஹ	ந்ச	-	-	-	ந்சா	ஹா	ந	ஸ்தா	-	-	
SHÄ	SU	HÄ	HU	TTA	BRA	NCHA	NÄ	STHÄ	SHKRI	HÄ	KSHA	SRI	10
ச. ஷ சு ஹு	தா	தா	தா	தா	ப்ரா	ந்சா	ந	ஸ்தா	ஸ்க்ரி	ஹ	க்ஷா	ஸ்ரி	
SHA	SI	SI	HÄ	HRI	NGÄ	JÄ	NCHA	SHNU	STHÄ	KSHE	HÄ	HKA	11
சா	சி	சி	ஹ	ஹ்ரி	ந்	ஜ	ந்சா	சுநு	ஸ்தா	க்ஷே	ஹ	ஹ்கா	
SHA	SU	SÜ	HE	NGÄ	TTA	NÄ	NCHA	NÄ	SHTI	CHCHHÄ	HPA	HKA	12
சா	சு	சு	ஹே	ந்	தா	ந	ந்சா	ந	ஸ்தி	சுசுஹ	ஹ்ப	ஹ்கா	

7. Pipardula plate of Narendra of Sarabhapura, 7th century A.D.
8. Kadamba inscriptions, 5th century A.D.
9. Yekkeri inscriptions of the time of Pulekesin II, early 7th century A.D.
10. Pallava inscriptions, 6th century A.D.
11. Inscriptions of the Madharas, 5th century A.D.
12. Inscriptions of the Gaṅgas between A.D. 575 and 680

MYSORE, MAHARĀSHTRA, AND GUJERAT

	A	Ā	I	U	E	RI	KO	KXI	KHA	GO	GU	GHA	CHI	CHA	CHHA	JA
1	𑌕.𑌕			𑌕	𑌕	𑌕	𑌕	𑌕	𑌕	𑌕	𑌕	𑌕	𑌕	𑌕	𑌕	𑌕
2	𑌕.𑌕	𑌕			𑌕	𑌕	𑌕	𑌕	𑌕	𑌕	𑌕	𑌕	𑌕	𑌕	𑌕	𑌕
3	𑌕.𑌕			𑌕	𑌕		𑌕	𑌕		𑌕		𑌕	𑌕	𑌕	𑌕	𑌕
4	𑌕.𑌕	𑌕	𑌕	𑌕	𑌕		𑌕	𑌕	𑌕	𑌕	𑌕	𑌕	𑌕	𑌕	𑌕	𑌕
5	𑌕.𑌕	𑌕	𑌕	𑌕			𑌕	𑌕	𑌕	𑌕	𑌕	𑌕	𑌕	𑌕	𑌕	𑌕
6	𑌕.𑌕			𑌕			𑌕	𑌕		𑌕		𑌕	𑌕	𑌕	𑌕	𑌕
7	𑌕.𑌕	𑌕	𑌕	𑌕	𑌕		𑌕	𑌕	𑌕	𑌕	𑌕	𑌕	𑌕	𑌕	𑌕	𑌕
8	𑌕.𑌕	𑌕	𑌕				𑌕	𑌕	𑌕	𑌕	𑌕	𑌕	𑌕	𑌕	𑌕	𑌕
9	𑌕.𑌕	𑌕	𑌕	𑌕	𑌕		𑌕	𑌕	𑌕	𑌕	𑌕	𑌕	𑌕	𑌕	𑌕	𑌕
10	𑌕.𑌕	𑌕	𑌕	𑌕	𑌕	𑌕	𑌕	𑌕	𑌕	𑌕	𑌕	𑌕	𑌕	𑌕	𑌕	𑌕
11	𑌕			𑌕			𑌕	𑌕	𑌕	𑌕	𑌕	𑌕	𑌕	𑌕	𑌕	𑌕
12	𑌕	𑌕	𑌕	𑌕	𑌕		𑌕	𑌕	𑌕	𑌕	𑌕	𑌕	𑌕	𑌕	𑌕	𑌕

1. Malvalli inscriptions of Kadamba Śivaskandavarman, early 4th century A.D.
2. Kadamba inscriptions, 5th century A.D.
3. Bannahalli plates of Kṛishṇavarman II, mid-6th century A.D.
4. Western Chālukya inscriptions, 2nd half 6th century A.D.
5. Inscriptions of Pulekeśin II, 1st half 6th century
6. Nerur plates of Vijayabhattachārikā, 659 A.D.

PLATE XVIa

NA	TA	THA	DA	DHA	NA	TI	TĪ	THA	DI	DHA	NA	1				
			𑀢		𑀓	𑀔	𑀕	𑀖	𑀗	𑀘	𑀙					
TA					NI	NĀ	TĪ	TĀ	THĀ	DA	DHĀ	NE	2			
𑀢					𑀓	𑀔	𑀕	𑀖	𑀗	𑀘	𑀙	𑀚				
TU	THI				𑀓	𑀔	𑀕	𑀖		DU	DAI	DHE	NU	3		
𑀢	𑀣				𑀓	𑀔	𑀕	𑀖		𑀗	𑀘	𑀙	𑀚			
TA		DA			NĀ	TĪ	TU	THA	THĀ	DAI	DHĀ	NU	NRI	4		
𑀢		𑀢			𑀓	𑀔	𑀕	𑀖	𑀗	𑀘	𑀙	𑀚	𑀛			
TA					NE	NĀM	TĪ	TĀ	THI	THĀ	DU	DHŪ	NU	NE	5	
𑀢					𑀓	𑀔	𑀕	𑀖	𑀗	𑀘	𑀙	𑀚	𑀛	𑀜		
TĀ					NA	TĀ	TĪ	THI	DI	DHE	NRI			6		
𑀢					𑀓	𑀔	𑀕	𑀖	𑀗	𑀘	𑀙					
TA TU		DĀ	DHA		NA	TA	TĀ	THI	DA	DHĀ	NA	7				
𑀢 𑀣		𑀢	𑀢		𑀓	𑀔	𑀕	𑀖	𑀗	𑀘	𑀙					
TA		DĀ			NE	TRI	TĀ	THĀ	DĀ	DŪ	DHĀ	DHŪ	NU	8		
𑀢		𑀢			𑀓	𑀔	𑀕	𑀖	𑀗	𑀘	𑀙	𑀚	𑀛			
TA					NĀ	NĀI	TĪ	THĀ	DA	DHE	NU	NĪ	9			
𑀢					𑀓	𑀔	𑀕	𑀖	𑀗	𑀘	𑀙	𑀚				
TA		DI			𑀓	𑀔	TE	THI	DU	DĀ	DHĀ	NU	NO	10		
𑀢		𑀢			𑀓	𑀔	𑀕	𑀖	𑀗	𑀘	𑀙	𑀚	𑀛			
								THU	DE	DĀ	DHĀ	DHI	NA	11		
								𑀗	𑀘	𑀙	𑀚	𑀛	𑀜			
TĀ		DU	DO		NA	NI	TĪ	TU	THU	DE	DĀ	DHĀ	DHI	NRI	NU	12
𑀢		𑀢	𑀢		𑀓	𑀔	𑀕	𑀖	𑀗	𑀘	𑀙	𑀚	𑀛	𑀜	𑀝	

7. Western Chālukya inscriptions, late 7th and early 8th century A.D.
8. Traikūṭaka inscriptions, late 5th century A.D.
9. Gurjara inscriptions, late 6th century A.D.
10. Gurjara inscriptions, early 7th century A.D.
11. Paṭṭadakal inscriptions of the Rāshtrakūṭa Dhruva, late 8th century A.D.
12. Kanaṇṇi inscriptions of the Rāshtrakūṭas, late 8th century A.D.

MYSORE, MAHĀRĀSHTRA, AND GUJERAT

	PU PE		BA BHA BHO MĀ	YA	RI	LA	LA	VE VAI	SĀ	SHA
1	ਪੁ ਪੇ		ਬਾ ਬਹਾ ਬਹੁ ਮਾ	ਯਾ	ਰੀ	ਲਾ	ਲਾ	ਵੇ ਵਾ	ਸਾ	ਸ਼ਾ
	PĀ	PHA	BĀ BHU BHŪ MĀ	ME YĀ YE RU	RĪ	LA	LO	VĀ VI	SĪ	SHE
2	ਪਾ	ਫਾ	ਬਾ ਬਹੁ ਬਹੁ ਮਾ	ਮੇ ਯਾ ਯੇ ਰੁ	ਰੀ	ਲਾ	ਲੋ	ਵਾ ਵਿ	ਸੀ	ਸ਼ੇ
	PU PŪ	PHA	BĀ BHI BHE MĀ	MO YĀ YĀ RA	RO	LA	LO	LA	VI VĪ	SĪ SHI SHU
3	ਪੁ ਪੂ	ਫਾ	ਬਾ ਬਹਿ ਬਹੇ ਮਾ	ਮੋ ਯਾ ਯਾ ਰਾ	ਰੋ	ਲਾ	ਲੋ	ਲਾ	ਵੀ ਵੀ	ਸੀ ਸ਼ੀ ਸ਼ੂ
	PAU PŪ	PHA	BA BU BHRĪ BHŪ MĀ	MO YU YO RŪ	RŪ	LA	LE LĪ	LŪ	VI VĀ	SĪ SHE
4	ਪੁ ਪੂ	ਫਾ	ਬਾ ਬੁ ਬਹ੍ਰੀ ਬਹੁ ਮਾ	ਮੋ ਯੂ ਯੋ ਰੂ	ਰੂ	ਲਾ	ਲੇ ਲੀ	ਲੂ	ਵੀ ਵਾ	ਸੀ ਸ਼ੇ
	PI PRĪ	PHA	BA BHRĀ BHĀU	ME	YA	RA	LĀ LO L	L	VĪ VĀ	SŪ SHU
5	ਪੀ ਪ੍ਰੀ	ਫਾ	ਬਾ ਬਹ੍ਰਾ ਬਹਾ	ਮੇ	ਯਾ	ਰਾ	ਲਾ ਲੋ ਲ	ਲ	ਵੀ ਵਾ	ਸੂ ਸ਼ੂ
	PU PAU		BA BHA BHU	MĀ	YA	RĀ	LA		VI VĪ	SŪ SĪ
6	ਪੁ ਪਾ		ਬਾ ਬਹਾ ਬਹੁ	ਮਾ	ਯਾ	ਰਾ	ਲਾ		ਵੀ ਵੀ	ਸੂ ਸੀ
	PU PA	PHA	BA BHI BHU	MĀ	YA	RĀ	LA		VI VA	SĪ SHA
7	ਪੁ ਪਾ	ਫਾ	ਬਾ ਬਹਿ ਬਹੁ	ਮਾ	ਯਾ	ਰਾ	ਲਾ		ਵੀ ਵਾ	ਸੀ ਸ਼ਾ
	PI PAU		BU BHI BHU	ME	YA	RO	LĀ		VI VRĪ	SŌ SŪ
8	ਪੀ ਪਾ		ਬੁ ਬਹਿ ਬਹੁ	ਮੇ	ਯਾ	ਰੋ	ਲਾ		ਵੀ ਵ੍ਰੀ	ਸੋ ਸੂ
	PU PAU	PHA	BA BHO BHU	MU MO	YE	RĀ	RU LI	LO	VI VĪ	SŌ SŪ
9	ਪੁ ਪਾ	ਫਾ	ਬਾ ਬਹੋ ਬਹੁ	ਮੂ ਮੋ	ਯੇ	ਰਾ ਰੂ	ਲੀ ਲੋ		ਵੀ ਵੀ	ਸੋ ਸੂ
	PU PĀ	PHA	BĀ BHĀ BHŪ	MA	YŪ	RĀ RĪ	LAI LO		VA VĀ	SĀ SHA
10	ਪੁ ਪਾ	ਫਾ	ਬਾ ਬਹਾ ਬਹੁ	ਮਾ	ਯੂ	ਰਾ ਰੀ	ਲਾ ਲੋ		ਵਾ ਵਾ	ਸਾ ਸ਼ਾ
	PRĪ PO		BĀ BĀ BHA BHŪ	MA ME	YE	RĀ	LĪ	LE LO	VA VI	SHA
11	ਪ੍ਰੀ ਪੋ		ਬਾ ਬਾ ਬਹਾ ਬਹੁ	ਮਾ ਮੇ	ਯੇ	ਰਾ	ਲੀ ਲੇ ਲੋ	ਵਾ ਵੀ		
	PŪ PO		BRI BHĀ BHŪ	MĀ ME YĀ	YO RĀ	RE	LA	LO LE	LĪ VĀ	VAI SĪ
12	ਪੂ ਪੋ		ਬ੍ਰੀ ਬਹਾ ਬਹੁ	ਮਾ ਮੇ ਯਾ	ਯੋ ਰਾ	ਰੇ	ਲਾ ਲੋ ਲੇ	ਲੀ ਵਾ ਵਾ	ਸੀ	ਸ਼ਾ

1. Malvalli inscriptions of Kadamba Śivaskandavarman, early 4th century A.D.
2. Kadamba inscriptions, 5th century A.D.
3. Bannahalli plates of Krishṇavarman II, mid-6th century A.D.
4. Western Chālukya inscriptions, 2nd half 6th century A.D.
5. Inscriptions of Pulekeśin II, 1st half 6th century
6. Nerur plates of Vijayabhaṭṭārikā, 659 A.D.

SĪ	SAI	HA	NGA	ŃCHA	ŃDA	TĪTĀ	CHCHHA	KKHA	ŚRĪ	STHA	KSHA	SYA	1	
ಸಿ	ಸಾ	ಹಾ			ಢ್ದಾ	ತಿತಾ	ಚ್ಚಹಾ	ಕಕಾ	ಸ್ರೀ	ಸಥಾ	ಕಶಾ	ಸ್ಯಾ		
SĀ	HA	HI	ŃCHA	ŃJĪ	NDRO	RTTHA	CHCHHRI	HPRA	ŚRĪ	STHA	KSHE	NYĀ	2	
ಸಾ	ಹಾ	ಹಿ	ಢ್ಚಾ	ಢ್ಜಿ	ಢ್ದ್ರಾ	ರತ್ತಾ	ಚ್ಚಹರಿ	ಹಪ್ರಾ	ಸ್ರೀ	ಸಥಾ	ಕಶೇ	ನ್ಯಾ		
SRI	SŪ	HĀ		ŃCHA	BRA	SHĪ		HKHA	ŚRĪ	SHTHĀ	KSHE	TYU	3	
ಸ್ರೀ	ಸು	ಹಾ		ಢ್ಚಾ	ಬ್ರಾ	ಶಿ		ಹಕಾ	ಸ್ರೀ	ಶಥಾ	ಕಶೇ	ತ್ಯು		
SU	HĀ	HĪ	ŃGA	ŃJĪ	ŃCHA	NDĀ	SHTO	ŚLO	HPRI	ŚRĪ	SHTHĀ	DDHI	LKYĀ	4
ಸು	ಹಾ	ಹಿ	ಢ್ಚಾ	ಢ್ಜಿ	ಢ್ಚಾ	ಢ್ದಾ	ಶತಾ	ಶ್ಲಾ	ಹಪ್ರಿ	ಸ್ರೀ	ಶಥಾ	ದ್ದಹಿ	ಲಕ್ಯಾ	
SĪ	HI	HŪ	ŃSĀ	ŃJĪ	NDĀ	JĀ	CHCHHE	HPRA	DRĀ	RTTHA	JJHA	LLA	5	
ಸಿ	ಹಿ	ಹು	ಢ್ಸಾ	ಢ್ಜಿ	ಢ್ದಾ	ಜಾ	ಚ್ಚಹೇ	ಹಪ್ರಾ	ದ್ರಾ	ರತ್ತಾ	ಜ್ಜಾ	ಲ್ಲಾ		
SA	HĀ	HĪ							ŚRĪ		KSHĪ		6	
ಸಾ	ಹಾ	ಹಿ							ಸ್ರೀ		ಕಶಿ			
SŪ	HĀ		ŃKA	ŃCHĪ	NDĀ	PTA	ŃCHHA	TRĪ	TRĀ	SHKRĪ	KSHO		7	
ಸು	ಹಾ		ಢ್ಕಾ	ಢ್ಚಿ	ಢ್ದಾ	ಪ್ತಾ	ಢ್ಚಹಾ	ತ್ರಿ	ತ್ರಾ	ಶಕ್ರಿ	ಕಶಾ			
SE	HA		ŃKA	ŃCHA	NDĀ	JĀ	HKRĪ	HPA	ŚRĪ	STHI	RGCHA	YYA	8	
ಸೆ	ಹಾ		ಢ್ಕಾ	ಢ್ಚಾ	ಢ್ದಾ	ಜಾ	ಹಕ್ರಿ	ಹಪಾ	ಸ್ರೀ	ಸಥಿ	ರಗ್ಚಾ	ಯ್ಯಾ		
SU	HU	HĀ		JJĀ	NDĀ		CHCHHE			STHI		SYA	9	
ಸು	ಹು	ಹಾ		ಜ್ಜಾ	ಢ್ದಾ		ಚ್ಚಹೇ			ಸಥಿ		ಸ್ಯಾ		
SA	HO	HRI	ŃGHE	ŃCHA	NDĀ	RGCHA	CHCHHA	HPA		SHTHĀ			10	
ಸಾ	ಹಾ	ಹರಿ	ಢ್ಗಹೇ	ಢ್ಚಾ	ಢ್ದಾ	ರಗ್ಚಾ	ಚ್ಚಹಾ	ಹಪಾ		ಶಥಾ				
SĀ	SŪ	HĀ	HAN	MBOĻ	NDĀ	TĪTĀ	LLA	ŚVĀ	ŚRĪ	STĪ		JYĀ	11	
ಸಾ	ಸು	ಹಾ	ಹಾನ್	ಮ್ಬಾ	ಢ್ದಾ	ತಿತಾ	ಲ್ಲಾ	ಶ್ವಾ	ಸ್ರೀ	ಸತಿ		ಜ್ಯಾ		
SĪ	SU	HĀ	LŪ	ŃCHA	NDU	SHŪ	LLA	TSA	ŚRĪ	STHI	KSHA	JYĀ	12	
ಸಿ	ಸು	ಹಾ	ಲು	ಢ್ಚಾ	ಢ್ದು	ಶು	ಲ್ಲಾ	ತ್ಸಾ	ಸ್ರೀ	ಸಥಿ	ಕಶಾ	ಜ್ಯಾ		

7. Western Chālukya inscriptions, late 7th and early 8th century A.D.
8. Traikūṭaka inscriptions, late 5th century A.D.
9. Gurjara inscriptions, late 6th century A.D.
10. Gurjara inscriptions, early 7th century A.D.
11. Paṭṭadakal inscriptions of the Rāshtrakūṭa Dhruva, late 8th century A.D.
12. Kanaṇi inscriptions of the Rāshtrakūṭas, late 8th century A.D.

ANDHRA AND THE NEIGHBOURING AREAS

	A	Ā	I	U	E	O	KĀ	KE	KHĀ	GO	CHO	CHA	CHHA	JA
1	𑌕.𑌕	𑌕	𑌕		𑌕	2	𑌕.𑌕	𑌕	𑌕	𑌕	𑌕	𑌕	𑌕	𑌕.𑌕
2	𑌕.𑌕	𑌕			𑌕		𑌕	𑌕	𑌕	𑌕	𑌕	𑌕		𑌕
3	𑌕						𑌕		𑌕			𑌕		𑌕
4	𑌕.𑌕	𑌕			𑌕		𑌕		𑌕.𑌕			𑌕		𑌕.𑌕
5	𑌕.𑌕	𑌕	𑌕		𑌕		𑌕.𑌕	𑌕	𑌕.𑌕	𑌕		𑌕		𑌕.𑌕
6	𑌕.𑌕	𑌕	𑌕	𑌕			𑌕.𑌕	𑌕	𑌕.𑌕	𑌕.𑌕		𑌕.𑌕	𑌕	𑌕.𑌕
7							𑌕	𑌕		𑌕		𑌕	𑌕	𑌕
8	𑌕.𑌕	𑌕	𑌕		𑌕		𑌕	𑌕	𑌕.𑌕	𑌕	𑌕	𑌕		𑌕
9	𑌕.𑌕	𑌕	𑌕	𑌕	𑌕		𑌕.𑌕	𑌕	𑌕.𑌕	𑌕.𑌕	𑌕	𑌕.𑌕		𑌕
10	𑌕.𑌕	𑌕	𑌕	𑌕	𑌕	2	𑌕.𑌕	𑌕	𑌕.𑌕	𑌕.𑌕	𑌕	𑌕	𑌕.𑌕	𑌕
11	𑌕.𑌕	𑌕				𑌕	𑌕.𑌕	𑌕	𑌕.𑌕	𑌕.𑌕	𑌕	𑌕		𑌕.𑌕
12	𑌕.𑌕	𑌕			𑌕		𑌕.𑌕	𑌕	𑌕	𑌕.𑌕		𑌕		𑌕.𑌕

1. Kondamudi plates of the Brīhatphalāyana ruler Jayavarman, early 4th century A.D.
2. The Śālaṅkāyana inscriptions, middle 4th century A.D.
3. Kanteru plates of the Śālaṅkāyana Vijaya Skandavarman, early 5th century A.D.
4. Ipur plates of the Viṣṇukunḍin ruler Mādhavarman I, late 6th century A.D.
5. The Viṣṇukunḍin inscriptions, 7th century A.D.
6. The Gaṅga inscriptions, 8th century A.D.

PLATE XVIIa

NA	TU	THA	DI	DHA	NA	TO	TU	THA	DA	DU	DHA	NA	1	
	୨	୦	୧	୧	୧	୩	୩	୭	୧, ୨	୦	୧			
			DA		NĀ	NE	TO	THA	DĀ	DE	DHĀ	NO	NU	
			୧		୩, ୩	୩	୩	୦	୧, ୧	୦	୩	୩	୩	
			DA		NO	TI	THA	DĀ	DHĀ		NU			
			୧		୩	୩	୦	୧	୦		୩		3	
			DA		NA	TA	THĀ	DĀ	DHĀ	DHAI	NU			
			୧		୩	୩	୦	୧	୦, ୦		୩		4	
	TA		DA	DHA	NI	NĀ	TO	TAI	DĀ	DHĀ	DHAU	NU	NRI	
	୧, ୧		୧	୧	୩	୩	୩	୦	୧	୦	୩	୩	୩	
	TU		DĀ		NĪ	NA	TĀ	TU	DA	DE	DHĀ	NU		
	୨		୧, ୧		୩	୩	୩	୩	୧, ୧	୦	୩	୩	୩	
					NĀM	NA	TRI	TU	DA	DŪ	DHĀ	DHE	NU	NE
					୩, ୩	୩	୩	୩	୧, ୩	୦	୩	୩	୩	୩
	TI				NA	TI	TĪ	THĀ	DI	DHI	NĀ			
	୧				୩	୩	୩	୦, ୩	୧	୩	୩		8	
	TU		DA		NĀM	NĀ	TĀ		DĀ	DHŪ	NU	NĀ		
	୩		୧		୩, ୩	୩	୩		୧	୩	୩	୩	୩	
	TA	TI	DA		NĀ	TĀ	TI	THA	DA	DHĀ	NO			
	୧, ୧		୧		୩	୩	୩	୦, ୦	୧	୦	୩		10	
					NĀ	NE	TU	TO	DRI	DHI	NO	NRI		
					୩, ୩	୩	୩	୩	୩	୩	୩	୩	୩	
					NO	NE	TE		DĀ	DHĀ	NE			
					୩, ୩	୩	୩		୧	୦	୩		12	

* This letter could be *Lā*

7. Timmapuram plates of Vishṇuvardhana I, early 7th century A.D.
8. Inscriptions of Jayasimha I, mid-7th century A.D.
9. Inscriptions of Indravarman and Sarvalokāśraya, late 7th century A.D.
10. Inscriptions of Vishṇuvardhana III and Vijayāditya, early 8th century A.D.
11. Gorantla plates of Attivarman, early 7th century A.D.
12. Mattepad plates of Dāmodaravarman, early 7th century A.D.

ANDHRA AND THE NEIGHBOURING AREAS

1	PA	PHA	BRI	BE	BHA	MA	MO	YU	YI	RE	RU	LĀ	LA	VI	VĀ	SA	SHA
	ପା	ଫା	ବ୍ରି	ବେ	ଭା	ମା	ମୋ	ୟୁ	ୟି	ରେ	ରୁ	ଲା	ଲା	ବି	ବା	ସା	ସା
2	PU	PAU	PHA	BA	BHŪ	MĀ	ME	YA	YĀ	RĀ	RĪ	LŪ	LU	VI	VE	SĀ	SHA
	ପୁ	ପା	ଫା	ବା	ଭୁ	ମା	ମେ	ୟା	ୟା	ରା	ରି	ଲୁ	ଲୁ	ବି	ବେ	ସା	ସା
3	PĀ	PHA	BA	BHA	MĪ	YA			RĪ	LA	LĀ			VI	VE	SŌ	
	ପା	ଫା	ବା	ଭା	ମି	ୟା			ରି	ଲା	ଲା			ବି	ବେ	ସୋ	
4	PĀ	PŪ	PHA	BA	BHA	BHŪ	MĀ	ME	YŌ	YU	RĪ	RE	LE		VI	SĀ	SHAH
	ପା	ପୁ	ଫା	ବା	ଭା	ଭୁ	ମା	ମେ	ୟୋ	ୟୁ	ରି	ରେ	ଲେ		ବି	ସା	ସାହ
5	PU	PHA	BO	BHRI	MĀ	MO	YŪ	RU	RA	LI	LĪ	LŪ	LE	VĀ	VE	SĀ	SHA
	ପୁ	ଫା	ବୋ	ଭ୍ରି	ମା	ମୋ	ୟୁ	ରୁ	ରା	ଲି	ଲି	ଲୁ	ଲେ	ବା	ବେ	ସା	ସା
6	PI	PŪ	PHA		BHŪ	MĀ	MA	YĀ	YU	RO	LA	LĀ		VĀ	VA	SĀU	SHĀ
	ପି	ପୁ	ଫା		ଭୁ	ମା	ମା	ୟା	ୟୁ	ରୋ	ଲା	ଲା		ବା	ବା	ସାଉ	ସା
7	PU	PAU			BHU	BHI	MĀ	MŪ	YAU	RŪ	LŪ	LO	LA	VA		SĪ	SHA
	ପୁ	ପା			ଭୁ	ଭି	ମା	ମୁ	ୟା	ରୁ	ଲୁ	ଲୋ	ଲା	ବା		ସି	ସା
8	PU	PO	PHA	BĀ	BŪ	BHĀ	MĀ	MO	YĀ	YE	RĀ	RA	LA		VĀ	SŌ	SŪ
	ପୁ	ପୋ	ଫା	ବା	ବୁ	ଭା	ମା	ମୋ	ୟା	ୟେ	ରା	ରା	ଲା		ବା	ସୋ	ସୁ
9	PŪ	PO		BO	BHU	BHŪ	MĀ	YA	YĀ	RĪ	RŪ	LA	LE	LU	VA	SĪ	SHA
	ପୁ	ପୋ		ବୋ	ଭୁ	ଭୁ	ମା	ୟା	ୟା	ରି	ରୁ	ଲା	ଲେ	ଲୁ	ବା	ସି	ସା
10	PA	PHA	BA		BHU	MĀ	MO	YA	RĪ	RE	LA	LU	LA	VA	SĀ	SHA	
	ପା	ଫା	ବା		ଭୁ	ମା	ମୋ	ୟା	ରି	ରେ	ଲା	ଲୁ	ଲା	ବା	ସା	ସା	
11	PU	PAU		BĀ	BHU	BHŪ	MU	ME	YA		RU	LE		VĀ	SĀ	SHA	
	ପୁ	ପା		ବା	ଭୁ	ଭୁ	ମୁ	ମେ	ୟା		ରୁ	ଲେ		ବା	ସା	ସା	
12	PĀ	PŪ	PHA	BU	BHI	MO	ME	YA	RĀ	RAI	LA	LI		VO	SŪ	SHĀ	
	ପା	ପୁ	ଫା	ବୁ	ଭି	ମୋ	ମେ	ୟା	ରା	ରା	ଲା	ଲି		ବୋ	ସୁ	ସା	

1. Kondamudi plates of the Brīhatphalāyana ruler Jayavarman, early 4th century A.D.
2. The Śālaṅkāyana inscriptions, middle 4th century A.D.
3. Kanteru plates of the Śālaṅkāyana Vijaya Skandavarman, early 5th century A.D.
4. Ipur plates of the Vishṇukunḍin ruler Mādhavarman I, late 6th century A.D.
5. The Vishṇukunḍin inscriptions, 7th century A.D.
6. The Gaṅga inscriptions, 8th century A.D.

PLATE XVIIIb

SI	HĒ	HI	ŃCA	ŃCHA	JŃĀ	NHU	MHA	SVA	TPHA	HPA	SRI	SYA	1	
SA	SU	HE	HĀ	ŃGĀ	ŃCHA	JJHĀ	ŃDA	TTHĀ	KKHA	CHCHHA	HPA	SRI	VVA	2
			HĀ	ŃGYĀ							SRI		3	
SŪ	HI	HRI			JŃĀ	NDI	SHNU	RTTHAM	KRA	BRĀ	SRI	SYA	4	
SŪ	HĪ		ŃCHA		JŃĀ	NDĀ	HMA	MME	CHCHHRĪ	TĪĀ	SRI	KHYĀ	5	
SA	SU	HE	HA		ŃJĪ	JŃĀ		RTTHA			KSHĪ	TYĀ	6	
SA	HĀ	HĪ		NTRI	TPI	NDĀ	SHĪA	STHA	KRA	HPRI	KSHI	NYO	7	
SA	HĀ		ŃGHA	NDHĀ	JŃO	NDI	SHNU	TPA	CHCHHA	TĪĀ	KSHI		8	
SA	HĀ		ŃCHA	SCHĀ	JŃĀ	NDI	SHNOH	STHA	CHCHHI	STŪ	KSHMĪ	NYA	9	
SŪ	HA		ŃCHHA	ŃCHA	JŃĀ	NDĀ			LLA	BRĀ	KSHĪ	ŃYĀ	10	
SŪ	HĀ		NTHI		JŃĀ	NDĀ	SHĪA	KPRA	TRĪ	TĪI	SRI	NYA	11	
	HI	HU			JŃĀ	NDI	BRĀ	SYA	CHCHHA	HPI	HKRI	DHYĀ	12	

7. Timmapuram plates of Vishṇuvardhana I, early 7th century A.D.
8. Inscriptions of Jayasimha I, mid-7th century A.D.
9. Inscriptions of Indravarman and Sarvalokāśraya, late 7th century A.D.
10. Inscriptions of Vishṇuvardhana III and Vijayāditya, early 8th century A.D.
11. Gorantla plates of Attivarman, early 7th century A.D.
12. Mattepad plates of Dāmodaravarman, early 7th century A.D.

SOUTH INDIA

1	Ā	I	U	E	O	KĀ	KU	KHA	GRI	GO	GHA	CHĀ	CHA	CHHA	JA	JĪ
2	Ā	Ā	U	E		KO	KE	KHĀ	KHŌ	GĪ	GĀ	CHO	CHĪ	CHHA	JA	JO
3	Ā	Ā	I	U	E	KU	KE	KHĀ	KHU	GU	GO	GHA	CHA	CHI		JĪ
4	Ā	Ā				KŪ	KĀ	KHA	GU	GA		CHA	CHĀ	CHHE	JA	
5																
6	Ā			E	O	AU	KĀ	KRI	KHI	GO	GĪ	CHA	CHHA		JĪ	
7	Ā	Ā	I	U	Ū	E	O	KU	KHA	GA	GU	GHA	CHA	CHHA	JA	JĀ
8	Ā			E			KĀ			GU		CHĀ			JĪ	
9		I					KU	KRI		GU		CHI			JA	JĀ
10	Ā			E			KRI		GRI	GO		CHA			JE	
11		I					KRI	KĀ		GI	GU	CHI			JĀ	
12	Ā						KO	KĀ		GRI	GHA				JA	

1. Siroda(Goa) plates of Devarāja, 6th century A.D.
2. Mayidavolu plates of Śivaskandavarman, late 4th century A.D.
3. Hirahadagalli plates of Śivaskandavarman, late 4th century A.D.
4. British Museum plates of Chāru Devī, early 5th century A.D.
5. Darsi plate, early 6th century A.D.
6. Magdur and Pikira grants of Śimhavarman, middle 6th century A.D.

PLATE XVIIIa

JHA	ŃA	TA	THA	DA	DHA	NA	TE	TO	THĀ	THE	DA	DE	DHĀ	NĀ	NĪ	1
-	-	-	-	-	-	𑌕	𑌖	𑌗	𑌘	𑌙	𑌚	𑌛	𑌜	𑌝	𑌞	-
ŃA	TU	THO	DE	DA	-	-	TI	TŪ	THĀ	DI	DĀ	DHĀ	-	NE	-	2
𑌕	𑌖	𑌗	𑌘	𑌙	-	-	𑌚	𑌛	𑌜	𑌝	𑌞	𑌟	𑌠	𑌡	𑌢	-
-	TI	THA	DĪ	DU	DHA	NU	NĀ	TĀ	TŪ	THI	DU	DŪ	DHA	DHI	NĀ	NU
-	𑌚	𑌛	𑌜	𑌝	𑌞	𑌟	𑌠	𑌡	𑌢	𑌣	𑌤	𑌥	𑌦	𑌧	𑌨	𑌩
-	TE	-	-	-	-	NA	NĪ	TĀ	TU	THA	DU	DE	DHĀ	-	NĀ	4
-	𑌖	-	-	-	-	𑌕	𑌖	𑌗	𑌘	𑌙	𑌚	𑌛	𑌜	𑌝	𑌞	-
-	-	-	-	-	-	NA	NĪ	TĀ	TO	-	DA	DHI	-	NĀ	-	5
-	-	-	-	-	-	𑌕	𑌖	𑌗	𑌘	-	𑌚	𑌛	𑌜	𑌝	𑌞	-
-	-	-	DU	-	-	NĀ	NĪ	TĀI	TO	THĀ	DE	DHI	NO	NU	-	6
-	-	-	𑌥	-	-	𑌕	𑌖	𑌗	𑌘	𑌙	𑌚	𑌛	𑌜	𑌝	𑌞	-
-	TĀ	TU	DU	-	-	NĀ	NĪ	TĀ	TU	THĀ	THI	DE	DŪ	DHI	NO	NĀI
-	𑌛	𑌜	𑌝	-	-	𑌕	𑌖	𑌗	𑌘	𑌙	𑌚	𑌛	𑌜	𑌝	𑌞	𑌟
-	-	-	DE	-	-	NA	NĪ	TĀ	TRI	-	DAI	DĪ	DHI	NAU	-	8
-	-	-	𑌖	-	-	𑌕	𑌖	𑌗	𑌘	-	𑌚	𑌛	𑌜	𑌝	𑌞	-
-	-	-	-	-	-	NĀ	TO	THI	DI	DĀ	DHA	-	NE	-	-	9
-	-	-	-	-	-	𑌕	𑌖	𑌗	𑌘	𑌙	𑌚	𑌛	𑌜	𑌝	𑌞	-
-	-	-	-	-	-	-	TĪ	TO	-	DA	DHU	NĪ	NU	-	-	10
-	-	-	-	-	-	-	𑌚	𑌛	-	𑌚	𑌛	𑌜	𑌝	𑌞	𑌟	-
-	-	-	-	-	-	NU	NO	TI	TE	THĀ	DĪ	DHĀ	NRI	NĀ	-	11
-	-	-	-	-	-	𑌕	𑌖	𑌗	𑌘	𑌙	𑌚	𑌛	𑌜	𑌝	𑌞	-
-	-	-	-	-	-	NA	TI	TO	-	DA	DHI	NU	NE	-	-	12
-	-	-	-	-	-	𑌕	𑌖	𑌗	𑌘	-	𑌚	𑌛	𑌜	𑌝	𑌞	-

7. Omgodu grant (No. II) and Chura grant, 7th–8th century A.D.
8. Udayandiram plate of Nandivarman, 7th–8th century A.D.
9. Panamalai inscription, 8th century A.D.
10. Anaimalai inscription of the time of Parentaka, A.D. 770
11. Trichinopoly cave inscriptions, 7th century A.D.
12. Mamallapuram inscriptions, 7th–8th century A.D.

SOUTH INDIA

1	PĀ PHA	BĀ BHĀ BHŪ MO MĪ YO YĀ RĪ RU LĀ LĀ	LA VĀ VRĪ ŚĀ	SHĀ
2	PA PĪ	BA BHA MA MO YA YU RA RE LĀ LO	VĀ VE	
3	PU PE PHA	BI BE BHĀ BHŪ MA MO YĀ YĪ RĪ RU LĀ LO	VĀ VE	
4	PĀ PHA	BU BHĀ BHŪ MA MĪ YU YA RĪ RU LĀ LŪ	LI VA VĪ ŚĀ	
5	PO PAU	BA MA YA RĀ LĀ	VI VĪ ŚĀ	
6	PU PAU	BRĀ BHU MA YA PĀ RAI LAI LO	VRĪ VĪ ŚĀ	SHĀ
7	PAU PHA	BĀ BHA MĀ YA YU RĀ RU LĀ LO LA LA VRĪ VĪ	SŪ SHU	
8	PŪ	BĀ BHŪ MA YA RĀ RU LĀ LAI	LA VĪ SŪ	
9	PO PŪ	BĀ BHU BHŪ MĀ MĒ YA YO RE RU LĀ LO	VI VĀ ŚĪ ŚŌ	SHĀ
10	PU PAU	BHI BHŪ MĀ YE RO RĪ LĀ LE	VI ŚĪ	SHĀ
11	PU	BHU BHŪ ME MŪ YA RĪ RĪ LĀ LE	LĀ VI VE ŚĀI	SHO
12	PA	BHĀ BHU ME MĀ YĀ YA RĀ RU LĀ LO	LI VI ŚĀ	

* This bipartite Ya is used only once

1. Siroda(Goa) plates of Devarāja, 6th century A.D.
2. Mayidavolu plates of Śivaskandavarman, late 4th century A.D.
3. Hirahadagalli plates of Śivaskandavarman, late 4th century A.D.
4. British Museum plates of Chāru Devī, early 5th century A.D.
5. Darsi plate, early 6th century A.D.
6. Magdur and Pikira grants of Śirihavarman, middle 6th century A.D.

PLATE XVIIIb

SU	HA	RKA	ŃCHA	NNI	STHĀ	TTI	MPU	SHPA	STHĀ	CHCHHE	NYO	
ሀ	ሀ	ቀ	ገ.ገ	ሸ	ፀ	ቲ	ሞ	ሠ	ፀ	ፈ	ሃ	1
SĀ	HĀ	HI		T TO	MHE	TTI						2
ሀ	ሀ	ሀ		ፐ	ሜ	ቲ						
ሀ	ሀ	HA	DDHAM	ŃCHA	NHA	TTHE	TTI	CHCHE	LLA	TTTHA	CHCHHO	YYA
ሀ	ሀ	ሀ	ፍ	ገ	ሀ	ፐ	ቲ	ፍ	ሀ	ፐ.ፐ	ፍ	ሃ
SA	HĀ	HA	DDHA		VVA	SSA	TTA	SHKRI		CHCHHA	SYA	
ሀ	ሀ	ሀ			ሀ	ሀ	ሀ	ሀ		ሀ	ሀ	4
SA	HĀ	HU	BRA	TRA	TPĀ	SHTĀ	RJJI	SRĪ	KSHĀ	STHI	CHCHHI	NYA
ሀ	ሀ	ሀ	ፐ	ፐ	ፐ	ሀ	ሀ	ሀ	ሀ	ሀ	ሀ	5
	HĀ	ŃGA	ŃCHA	JŃA	NDĀ	NDHĀ	SRĪ	KSHA	STHI			BHYU
ሀ	ሀ	ሀ	ገ.ገ	ፍ	ፐ	ፐ	ሀ	ሀ	ሀ	ሀ		6
SA	HĀ	HU	ŃCHA	NDA	TMA	TTĀ	BRA	KSHA	STHI	HPI	SYA	
ሀ	ሀ	ሀ	ሀ	ሀ	ሀ	ሀ	ሀ	ሀ	ሀ	ሀ	ሀ	7
SAU	HU	ŃGHA	ŃCHĪ	ŃJA	NDĀ	TTĀ	BRA	KSHA				NYA
ሀ	ሀ	ሀ	ሀ	ሀ	ሀ	ሀ	ሀ	ሀ				8
SA	HU	HĪ	DRO	ŃJA	RJJI	MNO	SMĀ	PRA	KSHĪ	SHTĀ	LLA	KHYA
ሀ	ሀ	ሀ	ሀ	ሀ	ሀ	ሀ	ሀ	ሀ	ሀ	ሀ	ሀ	9
SAI SŪ	HAI	HĀ	NDA		NVAI	NDYA	SHINO	NTRĪ	SRĪ	SHTHO	BDA	DYA
ሀ	ሀ	ሀ	ሀ	ሀ	ሀ	ሀ	ሀ	ሀ	ሀ	ሀ	ሀ	10
SA	HA	NDRA	ŃCHO	JŃA		LLO	TRU	KSHE	STHĀ	RTTHĪ	VYA	
ሀ	ሀ	ሀ	ሀ	ሀ		ሀ	ሀ	ሀ	ሀ	ሀ	ሀ	11
SĀ	SA	HA	NTA	RDDHA	TTA	KRA	TRA	PRĪ	SRĪ	STHI	TYA	KYA
ሀ	ሀ	ሀ	ሀ	ሀ	ሀ	ሀ	ሀ	ሀ	ሀ	ሀ	ሀ	12

7. Omgodu grant (No. II) and Chura grant, 7th–8th century A.D.
8. Udayandiram plate of Nandivarman, 7th–8th century A.D.
9. Panamalai inscription, 8th century A.D.
10. Anaimalai inscription of the time of Parentaka, A.D. 770
11. Trichinopoly cave inscriptions, 7th century A.D.
12. Mamallapuram inscriptions, 7th–8th century A.D.

CEYLON

	A	I	U	E	O	KA	KI	KHA	GA	GU	CHA	CHI	CHHA	JA
1	𑌕.𑌕.𑌕	-	𑌕.𑌕	-	-	𑌕.𑌕	𑌕.𑌕	-	𑌕.𑌕	𑌕	𑌕	𑌕	-	-
2	-	-	-	-	-	𑌕	-	-	-	-	-	-	-	-
3	𑌕	-	-	𑌕	-	𑌕.𑌕	-	-	𑌕.𑌕	-	-	-	-	-
4	𑌕.𑌕.𑌕	-	-	-	-	𑌕.𑌕	𑌕.𑌕	-	𑌕.𑌕	𑌕	𑌕	𑌕	-	𑌕
5	𑌕.𑌕.𑌕	-	𑌕.𑌕	𑌕	𑌕	𑌕.𑌕	𑌕.𑌕	-	𑌕.𑌕	𑌕	𑌕	𑌕	-	𑌕.𑌕
6	𑌕.𑌕.𑌕	-	𑌕	-	-	𑌕.𑌕	𑌕.𑌕	-	𑌕.𑌕	𑌕	𑌕	𑌕	-	𑌕.𑌕
7	𑌕.𑌕.𑌕	-	𑌕	𑌕	-	𑌕	𑌕	-	𑌕	𑌕	𑌕	𑌕	-	𑌕.𑌕
8	𑌕.𑌕.𑌕	-	-	-	-	𑌕.𑌕	-	-	-	-	-	-	-	𑌕
9	𑌕.𑌕.𑌕	-	-	-	-	𑌕	-	-	𑌕	-	𑌕	-	-	𑌕
10	𑌕.𑌕.𑌕	-	-	-	-	𑌕.𑌕	𑌕.𑌕	-	𑌕	𑌕	𑌕	𑌕	-	𑌕.𑌕
11	𑌕.𑌕.𑌕	-	-	𑌕	𑌕	𑌕.𑌕	𑌕.𑌕	-	𑌕.𑌕	𑌕	𑌕	𑌕	-	𑌕.𑌕
12	𑌕	-	-	-	𑌕	𑌕	-	-	𑌕	-	𑌕	-	-	-
13	-	-	-	-	𑌕	𑌕.𑌕	𑌕.𑌕	-	𑌕	𑌕	𑌕	𑌕	-	𑌕.𑌕
14	-	𑌕	-	-	-	𑌕	𑌕	𑌕	𑌕	𑌕	𑌕	𑌕	-	𑌕.𑌕

* Read by others as U

1. Vessagiri and Ritigala cave inscriptions, 1st century A.D.
2. Vessagiri rock 'B' cave No. 12 inscriptions, early 2nd century A.D.
3. Veval-Tanna cave inscriptions, early 2nd century A.D.
4. Vessagiri, Naul Pata, and Maha-Ratmale rock inscriptions, late 2nd century A.D.
5. Palu Makiecava, Thuparam, and Viharegala rock inscriptions, early 3rd century A.D.
6. Perumaiyan-kulam, Jetavanaram, and Vallipuram inscriptions, late 3rd century A.D.
7. Tonigala and Timbirivava rock inscriptions

PLATE XIX_a

JHI	NA	TA	THA	DI	DHA	NE	NI	TU	TE	THA	DE	DI	DHA	NA	NU	
𑀧	-	𑀢	𑀣	𑀤	-	𑀥	𑀦	𑀧	𑀨	-	𑀩	𑀪	-	𑀫	𑀬	1
-	-	-	-	-	-	𑀥	𑀦	𑀧	𑀨	-	-	-	-	𑀫	𑀬	2
-	-	𑀢	-	-	-	-	𑀦	𑀧	𑀨	-	𑀩	𑀪	-	𑀫	𑀬	3
-	-	𑀢	-	-	-	𑀥	𑀦	𑀧	𑀨	-	𑀩	𑀪	𑀫	𑀬	𑀭	4
-	-	𑀢	-	𑀤	-	𑀥	𑀦	𑀧	𑀨	-	𑀩	𑀪	𑀫	𑀬	𑀭	5
-	-	𑀢	-	𑀤	-	𑀥	𑀦	𑀧	𑀨	-	𑀩	𑀪	-	𑀫	𑀬	6
-	-	𑀢	-	𑀤	𑀥	𑀥	𑀦	𑀧	𑀨	-	𑀩	-	-	𑀫	𑀬	7
-	-	𑀢	-	-	𑀥	𑀥	𑀦	𑀧	𑀨	-	𑀩	-	-	𑀫	𑀬	8
-	-	𑀢	-	𑀤	-	𑀥	𑀦	𑀧	𑀨	-	-	-	-	𑀫	𑀬	9
-	-	𑀢	-	𑀤	-	𑀥	𑀦	𑀧	𑀨	-	𑀩	𑀪	-	𑀫	𑀬	10
-	-	𑀢	-	𑀤	𑀥	𑀥	𑀦	𑀧	𑀨	-	𑀩	𑀪	-	𑀫	𑀬	11
-	-	𑀢	-	𑀤	-	-	𑀦	𑀧	𑀨	𑀣	𑀤	-	-	𑀫	𑀬	12
-	-	𑀢	-	-	-	-	𑀦	𑀧	𑀨	-	𑀩	𑀪	𑀫	𑀬	𑀭	13
-	-	𑀢	-	-	-	𑀥	𑀦	𑀧	𑀨	𑀣	𑀤	𑀥	𑀦	𑀧	𑀨	14

8. Ruvanvalisaya pillar inscription of the reign of Buddhādāsa, 5th century A.D.
9. Jetavanaram fragmentary inscription, 5th century A.D.
10. Kirivehera and Anuradhpur slab inscription, late 5th century A.D.
11. Nagarikanda, Nilagama, and Anuradhpur rock inscriptions, 6th century A.D.
12. Dakkhina-Thūpa inscription of Dathopatisa, 7th century A.D.
13. Kondakadu rock inscription of Upatissa, 7th century A.D.
14. Tiriya and Kuccaveli rock inscriptions, early 8th century A.D.

CEYLON

[illegible]

1. Vessagiri and Ritigala cave inscriptions, 1st century A.D.
2. Vessagiri rock 'B' cave No. 12 inscriptions, early 2nd century A.D.
3. Veval-Tanna cave inscriptions, early 2nd century A.D.
4. Vessagiri, Naul Pata, and Maha-Ratmale rock inscriptions, late 2nd century A.D.
5. Palu Makiecava, Thuparam, and Viharegala rock inscriptions, early 3rd century A.D.
6. Perumaiyan-kulam, Jetavanaram, and Vallipuram inscriptions, late 3rd century A.D.
7. Tonigala and Timbirivava rock inscriptions

PLATE XIXb

[illegible]

8. Ruvanvalisaya pillar inscription of the reign of Buddhadāsa, 5th century A.D.
9. Jetavanaram fragmentary inscription, 5th century A.D.
10. Kirivehera and Anuradhpur slab inscription, late 5th century A.D.
11. Nagarikanda, Nilagama, and Anuradhpur rock inscriptions, 6th century A.D.
12. Dakkhina-Thūpa inscription of Dathopatissa, 7th century A.D.
13. Kondakadu rock inscription of Upatissa, 7th century A.D.
14. Tiriya and Kuccaveli rock inscriptions, early 8th century A.D.

SOUTH EAST ASIA

	Ā	I	U	E	O	KO	KHA	GĀ	GA	GHA	CHA	CHHA	JĀ
1	𑄢	-	-	-	-	𑄢	-	𑄢	𑄢	-	𑄢	-	𑄢
2	𑄣	𑄣	𑄣	-	-	𑄣	𑄣	𑄣	𑄣	-	𑄣	-	𑄣
3	-	-	-	-	-	-	-	𑄣	-	-	-	-	-
4	𑄣	-	-	-	-	𑄣	-	-	-	-	-	-	𑄣
5	-	-	𑄣	-	-	𑄣	𑄣	-	-	-	-	-	𑄣
6	𑄣	-	-	-	-	𑄣	𑄣	𑄣	𑄣	-	𑄣	-	𑄣
7	𑄣	-	-	-	-	𑄣	𑄣	𑄣	𑄣	-	-	-	𑄣
8	𑄣	-	-	𑄣	-	𑄣	𑄣	𑄣	𑄣	-	𑄣	-	𑄣
9	-	-	-	-	-	𑄣	𑄣	𑄣	𑄣	-	𑄣	-	𑄣
10	𑄣	𑄣	𑄣	𑄣	-	𑄣	𑄣	𑄣	𑄣	-	𑄣	-	𑄣
11	𑄣	𑄣	𑄣	-	-	𑄣	𑄣	𑄣	𑄣	-	𑄣	-	𑄣
12	𑄣	𑄣	𑄣	𑄣	-	𑄣	𑄣	𑄣	𑄣	-	𑄣	-	𑄣
13	𑄣	𑄣	𑄣	-	-	𑄣	𑄣	𑄣	𑄣	-	𑄣	-	𑄣

INDOCHINA

1. Vo Canh inscription of Śrīmāra, late 4th century A.D.
2. Myson inscription of Bhadravarman, 5th century A.D.
3. Hon-cuc inscription, 5th century A.D.
4. Cho-Dinh inscription of Dharmamahārāja Bhadravarman, 5th century A.D.
5. Cham inscription from Dong-yen-chau, 5th century A.D.
6. Myson inscription of Sambhuvarman, 6th century A.D.
7. Thap-Muoi inscription of Guṇavarman, 6th century A.D.

JHA	NA	TA	THA	DA	DHA	NA	TA	THA	DI	DHA	NU		1
						ᳵ	ᳶ		᳷		᳸		
	TU					NA	TĀ	TU	THI	THĀ	DU	DU	2
	ᳵ					ᳶ	᳷	᳸	᳹	ᳺ	᳻	᳼	
						NI	TO		DE		NA		3
						᳾	᳿		ᳺ		᳻		
						NO	TĀ	THI	DE	DĀ	DHA	NA	4
						᳾	᳿	ᳺ	᳻	᳼	᳽	᳾	
							TI	TAU	THŪ	DI		NĪ	5
							᳼	᳽	᳾	᳿		ᳺ	
		DA				NA	TI	TU		DU		NA	6
		ᳵ				ᳶ	᳷	᳸		᳹		ᳺ	
						NĀ	TO	TU	THI	DE	DĀ	DHI	7
						᳾	᳿	ᳺ	᳻	᳼	᳽	᳾	᳿
		DĀ				NĀ	NAI	TĀ	TU	THĀ	DE	DHĀ	8
		ᳵ				ᳶ	᳷	᳸	᳹	ᳺ	᳻	᳼	᳽
						NA	TE	TĀ		DA		NO	9
						ᳶ	᳷	᳸	᳹	ᳺ		᳻	᳼
TAI		DA		DHO	NĀ	NE	TI	TU	THĀ	DĀ	DHAU	DHŪ	10
ᳵ		ᳵ		ᳶ	᳷	᳸	᳹	ᳺ	᳻	᳼	᳽	᳾	᳿
TA					NĀ	NAI	TE	TĀ	THĀ	DU	DĀ	DHĀ	11
ᳵ					ᳶ	᳷	᳸	᳹	ᳺ	᳻	᳼	᳽	᳾
					NĀ	NE	TI	TO		DA	DHA	NI	12
					ᳶ	᳷	᳸	᳹		ᳺ	᳻	᳼	᳽
TU					NĀ	NO	TĀ	TU	THA	THI	DE	DŪ	13
ᳵ					ᳶ	᳷	᳸	᳹	ᳺ	᳻	᳼	᳽	᳾

* This form of the medial *U* is used only once

INDOCHINA

8. Ta Prohm inscription of Rudravarman, 6th century A.D.
9. Tham Prasat inscription of Mahendravarman, mid-6th century A.D.
10. Han Chey inscription of Bhavavarman, late 6th century A.D.
11. Bayang inscription, dated Śaka 546 = A.D. 624
12. Ang Pou inscription of the time of Īśānavarman, early 7th century A.D.
13. Ang Chumnik inscription of Jayavarman, dated Śaka 589 = A.D. 667

SOUTH EAST ASIA

1	PI PHA BA BHRI BHA MRI YĀ RU LO LA VI VĪ SĀ SHA	𑀧 𑀢 𑀅 𑀕𑀲 𑀢𑀺 𑀕𑀸 𑀕𑀺 𑀲 𑀺 𑀺 𑀶 𑀶 𑀺 𑀺	
2	PŪ PHA BHĀ MĀ MO YU RĀ LA VO VĪ SĀ SHA SHĀ	𑀧𑀺 𑀢𑀺 𑀢𑀺 𑀕𑀸 𑀕𑀸 𑀕𑀸 𑀕𑀸 𑀲𑀺 𑀺 𑀶𑀺 𑀶𑀺 𑀺𑀺 𑀺𑀺	
3	PA BHĀ MO MI YĀ RĀ VĀ SĪ	𑀢𑀺 𑀢𑀺 𑀕𑀸 𑀕𑀸 𑀕𑀸 𑀲𑀺 𑀲𑀺 𑀶𑀺 𑀶𑀺	
4	PĀ PAU BHA MO MI YE YĀ RI VĀ	𑀢𑀺𑀺 𑀢𑀺𑀺 𑀢𑀺 𑀕𑀸 𑀕𑀸 𑀕𑀸 𑀲𑀺 𑀲𑀺	
5	PU BŪ BHŪ YA RI LA LO VA	𑀢𑀺 𑀢𑀺 𑀢𑀺 𑀕𑀸 𑀲𑀺 𑀺 𑀺 𑀶𑀺	
6	PI PŪ BU BHU MĀ YĀ RI LA VĀ SĀ SHA	𑀢𑀺 𑀢𑀺𑀺 𑀢𑀺 𑀢𑀺 𑀕𑀸 𑀕𑀸 𑀲𑀺 𑀺 𑀶𑀺 𑀶𑀺 𑀺𑀺	
7	PE PĀ BĀ BHO BHU MŪ MAI YE RI RŪ LO LA VĪ SĪ SĀU SHU	𑀢𑀺𑀺 𑀢𑀺𑀺 𑀢𑀺 𑀢𑀺𑀺 𑀢𑀺𑀺 𑀕𑀸 𑀕𑀸 𑀕𑀸 𑀲𑀺 𑀲𑀺 𑀺 𑀺 𑀶𑀺 𑀶𑀺 𑀶𑀺𑀺 𑀶𑀺𑀺	
8	BU BŪ BHU MĀ YĀ PĀ RU LĀ LAI VI SĒ SŌ SHI	𑀢𑀺 𑀢𑀺 𑀢𑀺 𑀕𑀸 𑀕𑀸 𑀕𑀸 𑀲𑀺 𑀢𑀺𑀺 𑀲𑀺𑀺 𑀺𑀺𑀺 𑀶𑀺 𑀶𑀺𑀺 𑀶𑀺𑀺	
9	PĪ PE BHŪ MĀ MI YĀ YE RI RĀ LO LI VĪ VE SĪ SHE	𑀢𑀺𑀺 𑀢𑀺𑀺 𑀢𑀺𑀺 𑀕𑀸 𑀕𑀸 𑀕𑀸 𑀕𑀸 𑀲𑀺 𑀲𑀺𑀺 𑀺𑀺𑀺 𑀶𑀺 𑀶𑀺𑀺 𑀶𑀺𑀺	
10	PĪ PO BA BHU BHŪ MI MAI YĀ YE RĀ RU LĀ LO VĀ VĪ SĀ SHU	𑀢𑀺𑀺 𑀢𑀺𑀺 𑀢𑀺 𑀢𑀺 𑀢𑀺𑀺 𑀕𑀸 𑀕𑀸 𑀕𑀸 𑀕𑀸 𑀲𑀺 𑀲𑀺𑀺 𑀺𑀺𑀺 𑀶𑀺 𑀶𑀺𑀺 𑀶𑀺𑀺	
11	PĪ PĀ PHA BU BHU BHŪ ME MAU YO YĀ RAI RU LĀ LO VĪ VO SŪ SHU	𑀢𑀺𑀺 𑀢𑀺𑀺 𑀢𑀺𑀺 𑀢𑀺 𑀢𑀺 𑀢𑀺𑀺 𑀕𑀸 𑀕𑀸 𑀕𑀸 𑀕𑀸 𑀕𑀸 𑀲𑀺 𑀲𑀺𑀺 𑀺𑀺𑀺 𑀶𑀺 𑀶𑀺𑀺 𑀶𑀺𑀺	
12	PĪ BHU BHŪ MI YO YĀ RĀ RO LI LO VA SĒ SĀ SHE	𑀢𑀺𑀺 𑀢𑀺𑀺 𑀢𑀺𑀺 𑀕𑀸 𑀕𑀸 𑀕𑀸 𑀕𑀸 𑀲𑀺 𑀲𑀺𑀺 𑀺𑀺𑀺 𑀶𑀺 𑀶𑀺𑀺 𑀶𑀺𑀺	
13	PE PRI PHA BHU BHĀ MĀ ME YU YAU RU RĀ LĪ LĪ VĪ VĪ SĀ SHU	𑀢𑀺𑀺 𑀢𑀺𑀺𑀺 𑀢𑀺𑀺 𑀢𑀺𑀺 𑀕𑀸 𑀕𑀸 𑀕𑀸 𑀕𑀸 𑀲𑀺 𑀲𑀺𑀺 𑀺𑀺𑀺 𑀶𑀺 𑀶𑀺𑀺 𑀶𑀺𑀺	

INDOCHINA

1. Vo Canh inscription of Śrīmāra, late 4th century A.D.
2. Myson inscription of Bhadravarman, 5th century A.D.
3. Hon-cuc inscription, 5th century A.D.
4. Cho-Dinh inscription of Dharmamahārāja Bhadravarman, 5th century A.D.
5. Cham inscription from Dong-yen-chau, 5th century A.D.
6. Myson inscription of Sambhuvarman, 6th century A.D.
7. Thap-Muoi inscription of Guṇavarman, 6th century A.D.

SA	HI	NGA	NCHA	JNĀ	STU	SHTHĀ	STHĀ	SHTA	NTA	TTYA	SYA	1
SA	HĀ		NCHA	JNĀ	SHNU	DDHAM	RMMA	CHCHHĀ	MBI	KSHA	SYĀT	2
SĀ	HĀ						SVĒ	SVĀ	DRE			3
SĀ	HĀ		CHCHA	NDRĀ	STU	SHTA	RMMA	SVĀ	SRI	GNA	TYAU	4
SI		RĀN		JMĀ	PUH	DDHAM	RCGA					5
SRI SU	HI			JNĀ		SHTHĀ	RMMA	SVĀ		NDHA	SYĀ	6
SĀ SU	HĀ	NGA	NDI	CHCHHA	HNI	SHĪA	HPRA	RTTHA	KRA	DYA	SYAT	7
SĀ	HĀ	NGHA	NDI	CHCHHI	STU	SHTA	STHA	HKA	RVVĀ	KSHI	SYA	8
SĀ SŪ	HE	NGA	HPU	TRAI	JAH	SHTHO	RMMA	HKA	SRI	KSHA	DYA	9
SĀU	HĀ	NGE	NDĀ	RNHA	NCHA	JJHI	HPA	TTHĀ	BHRŪ	STU	SYE	10
SŪ	HĀ	NGĪ	NDĀ	JNĀ	KTI	CHCHHA	HPRĀ	HKSHI	SŚRU	RGU	SYO	11
SA	HA	NKA	KHYĀ		STU	SHIII	STHĀ	HKHA	SRI	KSHI	TYAI	12
SĪ	SAU	HI	HĀ	NGHRI	NHA	JNĀ	PTAU	SHTHO	RMMA			13

INDOCHINA

8. Ta Prohm inscription of Rudravarman, 6th century A.D.
9. Tham Prasat inscription of Mahendravarman, mid-6th century A.D.
10. Han Chey inscription of Bhavavarman, late 6th century A.D.
11. Bayang inscription, dated Śaka 546 = A.D. 624
12. Ang Pou inscription of the time of Īśānavarman, early 7th century A.D.
13. Ang Chumnik inscription of Jayavarman, dated Śaka 589 = A.D. 667

SOUTH EAST ASIA

	A	I	U	E	O	KRI	KĪ	KHA	GA	CHA	CHĀ	CHHA	JE	JĀ
1	-	◻	-	-	-	𑊀 1x 𑊁	𑊂	-	𑊃, 𑊄	-	𑊅	-	𑊆 JE 𑊇	𑊈
2	-	-	-	-	-	-	-	-	𑊃	-	-	-	-	-
3	-	-	-	-	-	KRI	KA	KHA	GA	-	CHU	-	-	-
4	Ā	-	-	-	-	𑊀	𑊂	𑊃	𑊃	-	𑊅	-	𑊆	𑊈
5	-	-	-	-	-	KRI	KHĀ	GU	GĀ	-	CHA	-	𑊆	𑊈
6	A	I	-	E	AI	KĀ	KRI	KHA	GU	-	CHŪ	-	JA	E
7	-	-	-	-	-	𑊀	𑊂	𑊃	𑊃	-	𑊅	-	JA	E
8	-	-	-	E	-	-	-	-	𑊃	-	𑊅	-	-	-
9	Ā	Ā	I	-	-	KĀ	KE	-	𑊃	-	CHI	-	𑊆	𑊈
10	-	-	-	-	-	𑊀	𑊂	-	𑊃	-	𑊅	-	JA	E
11	A	-	-	E	-	KĀ	KHA	-	𑊃	-	CHU	-	JA	E
12	Ā	Ā	I	U	-	KU	KŪ	KHA	GO	NĀI	CHI	CHŪ	𑊆	𑊈

i* The angular lower hook is rare

BORNEO

1. Inscriptions of Mūlavarman, late 5th century A.D.

WESTERN JAVA

2. Ci-Arutan inscription of Pūrṇavarman, early 6th century A.D.

3. Jambu and Kebon Kopi inscriptions, early 6th century A.D.

4. Tuga inscription of Pūrṇavarman, early 6th century A.D.

CENTRAL JAVA

5. Inscription from Tuk Mas, early 7th century A.D.

6. Inscription from Canggal, dated Śaka 654 = A.D. 732

HA	NA	TA	THA	DA	DHA	NĀ	NAH	TE	TO	THĀ	DĀ	DHA	NĀ	NRĪ	
						க	க	த	த	த	த	த	த	த	1
						த	த	த	த						2
						த	த	த	த						3
						த	த	த	த						4
						த	த	த	த						5
						த	த	த	த						6
						த	த	த	த						7
						த	த	த	த						8
						த	த	த	த						9
						த	த	த	த						10
						த	த	த	த						11
						த	த	த	த						12

MALAYA

7. Kedah site No. 10 discs, 7th-8th century A.D.
8. Kedah site No. 1 stone inscription, 5th century A.D.
9. Kedah site No. 2 tablet inscription, early 7th century A.D.
10. Inscription of Mahānāvika Buddhagupta, early 6th century A.D.

SUMATRA

11. Inscription of Kedukan Bukit (1), dated Śaka 605 = A.D. 683
12. Kotakapur and Talang Tuwo inscriptions, dated Śaka 608 and 606

SOUTH EAST ASIA

1	PU	PO	PHA	BA	BHŪ	MĀ	MŪ	YĀ	YŪ	RE	RU	LA	LA	VI	SRI	SHĀ			
	PU				ME	MA	YA	RI	RE					VI	SRI	SHĀ			
2	PŪ	PĀ																	
	PŪ	PĀ			BHŪ	BHE	MĀ	MO	YĀ	RI	RO	LA		VI	SĀ				
3	PŪ	PĀ	PHĀ	BĀ	BI	BHŪ	BHĀ	MĀ	YO	YAU	RĀ	RĪ	LO	VI	SU	SHĀ			
4	PRA			BA		MA	YĀ							VĀ	SU	SĪ			
5	PU													VO	SĪ	SHĀ			
6	PĀ			BA		MO	MA	YA						VA					
7						MA	YE	RO						VA	VĀ	SHĀ			
8	PRA		BU	BHĀ	MĀ	YĀ	YE	RI	LĀ					VAI	SĀ	SHĀ			
9	PRA		BU		MRI	YĀ		RA						VĀ					
10	PA				BHI	MĀ	MU	YĀ	RI	LA				VU	SĪ	SŪ			
11	PĀ				BHŪ	BHĀ	ME	MRI	YA	YĀ	RO	RU	LI	LĀ	VAI	VU	SĀ	SŪ	RSHĀ
12																			

* The angular lower hook is rare

⊗ The circle-type of the medial *I* occurs only once

BORNEO

1. Inscriptions of Mulavarman, late 5th century A.D.

WESTERN JAVA

2. Ci-Arutan inscription of Purnavarman, early 6th century A.D.

3. Jambu and Kebon Kopi inscriptions, early 6th century A.D.

4. Tugu inscription of Purnavarman, early 6th century A.D.

CENTRAL JAVA

5. Inscription from Tuk Mas, early 7th century A.D.

6. Inscription from Canggal, dated Śaka 654 = A.D. 732

SA	SU	HĀ	HU	NGO	NCHA	NDU	PNA	MĀH	STHĀ	NTU	KSHA	SRI	KHĀ	1
𑀲	𑀱	𑀅	𑀇	𑀮	𑀭	𑀮	𑀮	𑀭	𑀮	𑀮	𑀮	𑀮	𑀮	
					DDHA	SHNĀ	YAM	RNNA	RMMA	KKRĀ	NDRA	SYA		
SA	HA				JNĀ	NDĀ	HDU	M	RNNA	RMMA	KSHA	PRA	KHĀ	2
𑀲	𑀅				𑀮	𑀮	𑀮	𑀮	𑀮	𑀮	𑀮	𑀮	𑀮	
SA	HU	NSE			VHYĀ	SHNĀ	NDRA	RNNA	TSA	KSHI	SRI	BHYA		3
𑀲	𑀇	𑀮			𑀮	𑀮	𑀮	𑀮	𑀮	𑀮	𑀮	𑀮	𑀮	
					CHCHĪ	KNNĀ	TPRA	RLĀ			SRI			4
𑀲					𑀮	𑀮	𑀮	𑀮	𑀮	𑀮	𑀮	𑀮	𑀮	
SAI	HĀ	IGU			NJA	NDĀ	SHNĀ	SHIHI	STHĪ	GMĀ	KSHA	SRI	NYO	5
𑀲	𑀅	𑀮			𑀮	𑀮	𑀮	𑀮	𑀮	𑀮	𑀮	𑀮	𑀮	
SA	HA	NDHA			STI	RYVĀ	JRĀ	RSI						6
𑀲	𑀅	𑀮			𑀮	𑀮	𑀮	𑀮						
	HĀ													7
𑀲	𑀅													
SA	HI				JNĀ	SHĀ		NNĀ	RMMA					8
𑀲	𑀅				𑀮	𑀮		𑀮	𑀮					
SA	HĀ				JNĀ	DDHA	CHCHĪ	NMA	NTU	RMMA	PTA	SYA		9
𑀲	𑀅				𑀮	𑀮	𑀮	𑀮	𑀮	𑀮	𑀮	𑀮	𑀮	
SU	HI				NCHA	SHĀ	DDHA							10
𑀱	𑀅				𑀮	𑀮	𑀮							
SI	SU	HA	HĀ	MPA	MVA	SHĀ	DDHA	T	STHĀ	DRĀ	KSHA	SRI	NYĀ	11
𑀲	𑀱	𑀅	𑀅	𑀮	𑀮	𑀮	𑀮	𑀮	𑀮	𑀮	𑀮	𑀮	𑀮	
														12

MALAYA

7. Kedah site No. 10 discs, 7th-8th century A.D.
8. Kedah site No. 1 stone inscription, 5th century A.D.
9. Kedah site No. 2 tablet inscription, early 7th century A.D.
10. Inscription of Mahānāvika Buddhagupta, early 6th century A.D.

SUMATRA

11. Inscription of Kedukan Bukit (1), dated Śaka 605 = A.D. 683
12. Kotakapur and Talang Tuwo inscriptions, dated Śaka 608 and 606

SOUTH EAST ASIA

	A	I	U	E	O	KRI	KHA	GA	GHA	CHA	CHĀ	CHHA	JA
1	-	-	-	-	-	꠫	-	-	-	꠬, ꠭	-	-	-
		1	U	E		KU		GA					
2	-	꠬	꠭	꠨	-	꠩	-	꠪	-	-	-	-	-
	Ā		U			KĀ KŪ		GO		CHA			JE
3	꠫	-	꠭	-	-	꠫, ꠬	-	꠪	-	꠬	-	-	꠨
			U*			KA	KHA	GA	NA	CHA			JA
4	-	-	꠨	-	-	꠫	꠬	꠪	꠨	꠬	-	-	꠨
			U*			KA	KHA		NA				
5	-	-	꠨, ꠨	-	-	꠫	꠬	-	꠨	-	-	-	-
			U*			KĪ (?)	KHA		GHA				JO ꠨
6	-	-	꠨	-	-	꠫	꠬	-	꠨	-	-	-	꠨, ꠨
	A		U x					GU	GHA		CHHO		JA
7	꠫	-	꠨	-	-	-	-	꠪	꠨	-	꠨	-	꠨
	Ā	1		E		KO		GA		CHU	CHHA		
8	꠫	꠬	-	꠨, ꠨	-	꠫	-	꠬	-	꠬	꠬	-	-
	Ā					KA	KHA	GA					
9	꠫	-	-	-	-	꠫	꠬	꠬	-	-	-	-	-
						KRI KU	KHI	GA		CHO			
10	-	-	-	-	-	꠫, ꠬	꠬	꠬	-	꠨	-	-	-
	A		U x			KA			NA				
11	꠫, ꠫	-	꠨	-	-	꠫	-	-	꠨	-	-	-	-
		1				KA KAM	KHE	GRI GA		CHĀ CHĪ			JA
12	-	꠬	-	-	-	꠫, ꠬	꠬	꠬, ꠬	-	꠬, ꠬	-	-	꠨

* This is actually the form of O, but in Pyu and Mon languages it is used for U

ARAKAN

1. Bell inscription from Vesali, late 7th century A.D.
2. Sandoway stone inscription, late 7th century A.D.

BURMA

3. Hmawza bilingual inscription only Sanskrit text, 7th century A.D.
4. Hmawza bilingual inscription only Pyu text, 7th century A.D.
5. Payagyi (Hmawza) Pyu inscriptions, 7th century A.D.
6. Halingyi Pyu inscription, 7th century A.D.

PLATE XXIIa

JHA	NA	TA	THA	DA	DHA	NA	TU	TRI	THA	DE	DHA	NA				
							Ṛ ^{TĀ}	Ṛ		Ṛ		Ṛ	1			
						NA	TU	THĀ	DA	DHA	NI		2			
						Ṛ	Ṛ	Ṛ	Ṛ	Ṛ	Ṛ	Ṛ				
						NA	NĀ	TE		DĀ	DHĀ	NU	3			
						Ṛ, Ṛ	Ṛ			Ṛ	Ṛ	Ṛ				
							TU	THA		DI			4			
							Ṛ	Ṛ		Ṛ						
							Ṛ						5			
							Ṛ ^{TLI}			Ṛ ^{DA DI}			6			
NO (1)				DA	DHAU (h)		TO	THA	DO	DHA	NA		7			
Ṛ				Ṛ	Ṛ		Ṛ	Ṛ	Ṛ	Ṛ	Ṛ					
						NĀ	TU	TE	THĀ	DI	DHO	NI	NU	8		
						Ṛ	Ṛ	Ṛ	Ṛ	Ṛ	Ṛ	Ṛ	Ṛ			
							TĀ			DA				9		
							Ṛ			Ṛ						
							TĀ			DA	DHA	NĪ		10		
							Ṛ			Ṛ	Ṛ	Ṛ				
NA				DE			TA	TI		DO				11		
Ṛ				Ṛ			Ṛ	Ṛ		Ṛ						
						NAM	TĀ	TI	THA	DI	DĪ	DHĀ	DHŪ	NO	NAM	12
						Ṛ	Ṛ	Ṛ	Ṛ	Ṛ	Ṛ	Ṛ	Ṛ	Ṛ	Ṛ	

7. Pyu text of Myazedi inscription, A.D. 1112-13
 8. Maunggun gold plates, late 6th century A.D.
 9. Kawgun cave inscription, 6th-7th century A.D.
- SIAM
10. Srideb inscription, 6th century A.D.
 11. Pra Pathom Mon inscription, 7th century A.D.
 12. Vāt Maheyang inscription, 7th century A.D.

SOUTH EAST ASIA

	PŪ	PĪ	PHA	BA	BHA	MĀ	YĀM	YE	RA	LA	LĀ	VA	SĀ	SHĀ
1	ပူ, ပီ		-	-	ဂ	မ	ယံ, ယ		-	-	-		ဆ	
2	ပာ, ပိ		-	-	ဃ	မာ	ယ	ရ		-	-	ဝ		
3	ပ		-		ဃိ, ဃု	မ	ယ	ရ, ရိ	လ			ဝိ, ဝု		
4	ပ			ဃိ		မ	ယ	ရ				ဝ		
5	ပိ	PHU	ဃ			မ	ယ	ရ, ရိ			လ	ဝိ		
6	ပု			ဃိ		မ	ယ	ရ			လ	ဝိ, ဝိ(?)		
7	ပ		ဃ, ဃ	ဃ	မ	ယ	ရ				လ	ဝိ		
8	ပု, ပိ		ဃ, ဃ	ဃ	မ	ယ	ယဲ, ယ	ရ, ရိ	လ, လိ			ဝ		
9	ပု, ပာ		-	-		မ	ယ	ရ				ဝ		
10	ပု, ဃ		-	-		မ	ယ	ရ, ရ	လ, လိ			ဝ	စ	
11	ပု*		ဃ, ဃ			မ	ယ	ရ	လ			ဝ*		
12	ပု, ပာ				ဃ	မ	ယ	ရ	လ, လ				ဆ	စ

* The medial is read as o and not au

ARAKAN

1. Bell inscription from Vesali, late 7th century A.D.
2. Sandoway stone inscription, late 7th century A.D.

BURMA

3. Hmawza bilingual inscription only Sanskrit text, 7th century A.D.
4. Hmawza bilingual inscription only Pyu text, 7th century A.D.
5. Payagyi (Hmawza) Pyu inscriptions, 7th century A.D.
6. Halingyi Pyu inscription, 7th century A.D.

SA	HA	NGA	NCHA	JHĀ	MMO	PTA	DBHA	TVĀ	NYA	RYYO	1
𑄢	-	𑄣	𑄤	𑄥	𑄦	𑄧	𑄨	𑄩	𑄪	𑄫	
SĀ	HE	-	NCHA	-	RMMA	-	-	-	SRA	HYA	2
𑄬	𑄭	-	𑄮	-	𑄯	-	-	-	𑄰	𑄱	
SA	-	YAM	-	NDRA	RMMA	-	-	STHI	-	RYYA	3
𑄲	-	𑄳	-	𑄴	𑄵	-	-	𑄶	-	𑄷	
SA	HI	TGA	DRU	SKA	-	-	RMA	SVA	SRI	HYA	4
𑄸	𑄹	𑄺	𑄻	𑄼	-	-	𑄽	𑄾	𑄿	𑅀	
SU	HI	SNI	HNI	KNI	KRA	KLA	PLA	-	TRA	-	5
𑄽	𑄹	𑄺	𑄻	𑄼	𑄾	𑄿	𑅁	-	𑅂	-	
SI	HA	TGA	TOA	KNU	OM	PKI	SRI	DDHA	TRI	KYA	6
𑄾	𑄹	𑄺	𑄻	𑄼	𑄾	𑄿	𑅁	𑅃	𑅄	𑅅	
SI	HI	HNU	SNI	PDU	KRA	HRA	-	-	-	TYA	7
𑄾	𑄹	𑄺	𑄻	𑄼	𑄾	𑄿	-	-	-	𑅆	
SA	HĀ	HĪ	NGA	NCHA	JHĀ	TMA	SHĀ	JJĀ	DDHI	NDRI	8
𑄾	𑄹	𑄺	𑄻	𑄼	𑄾	𑄿	𑅁	𑅇	𑅈	𑅉	
-	-	-	-	-	-	-	-	SVA	DDHA	SRI	9
-	-	-	-	-	-	-	-	𑅇	𑅈	𑅉	
SI	HĪ	NHE	NVI	SCHO	RMMA	SHĀ	TTA	RSHI	KTĀ	-	10
𑄾	𑄹	𑄺	𑄻	𑄼	𑄾	𑄿	𑅁	𑅇	𑅈	-	
-	HĀ	-	DNO	-	-	-	-	BRĀ	SRA	-	11
-	𑄹	-	𑄺	-	-	-	-	𑄽	𑄾	-	
SO	HĀ	HA	NGHI	DGA	NAM	RECHHA	STI	TRĀ	-	-	12
𑄾	𑄹	𑄺	𑄻	𑄼	𑄾	𑄿	𑅁	𑅁	-	-	

⊕ Blagden reads it as initial O

7. Pyu text of Myazedi inscription, A.D. 1112-13

8 Maunggun gold plates, late 6th century A.D.

9. Kawgun cave inscription, 6th-7th century A.D.

SIAM

10. Srideb inscription, 6th century A.D.

11. Pra Pathom Mon inscription, 7th century A.D.

12. Vāt Maheyang inscription, 7th century A.D.

THE KHAROSHṬHĪ SCRIPT

	A	AM	I	U	E	O	KA	KU	KHA	KHO	GA	GE	GHO	CHRA	CHA	CHI	CHHA	CHHA'	JA	JI
1	𑀅	𑀅𑀭	𑀅	𑀆	𑀇	𑀈	𑀉	𑀊	𑀋	𑀌	𑀍	𑀎	𑀏	𑀐	𑀑	𑀒	𑀓	𑀔	𑀕	𑀖
2	𑀅	𑀅𑀭	𑀅	𑀆	𑀇	-	𑀉	𑀊	𑀋	𑀌	𑀍	-	-	-	𑀑	𑀒	𑀓	𑀔	𑀕	𑀖
3	𑀅	-	𑀅	𑀆	-	-	𑀉	𑀊	-	-	𑀍	-	-	-	-	-	-	-	-	𑀖
4	𑀅	-	𑀅	-	𑀇	-	𑀉	𑀊	𑀋	𑀌	𑀍	𑀎	𑀏	-	𑀑	𑀒	𑀓	𑀔	𑀕	𑀖
5	𑀅	-	-	-	𑀇	𑀈	𑀉	𑀊	𑀋	𑀌	𑀍	-	-	𑀑	𑀒	𑀓	𑀔	𑀕	𑀖	𑀗
6	𑀅	-	𑀅	𑀆	𑀇	-	𑀉	𑀊	𑀋	𑀌	𑀍	𑀎	𑀏	𑀐	𑀑	𑀒	𑀓	𑀔	𑀕	𑀖
7	𑀅	-	-	-	𑀇	𑀈	-	-	-	-	𑀍	-	-	-	-	-	-	-	-	-
8	𑀅	𑀅	𑀅	𑀆	𑀇	𑀈	𑀉	𑀊	𑀋	𑀌	𑀍	𑀎	𑀏	𑀐	𑀑	𑀒	𑀓	𑀔	𑀕	𑀖
9	𑀅	𑀅	𑀅	-	𑀇	𑀈	𑀉	𑀊	𑀋	𑀌	𑀍	𑀎	-	𑀑	𑀒	𑀓	𑀔	𑀕	𑀖	𑀗
10	𑀅	𑀅	𑀅	𑀆	𑀇	-	𑀉	𑀊	𑀋	𑀌	𑀍	𑀎	-	𑀑	𑀒	𑀓	𑀔	𑀕	𑀖	𑀗
11	𑀅	𑀅	𑀅	-	𑀇	𑀈	-	𑀉	𑀊	𑀋	-	-	-	𑀑	𑀒	𑀓	𑀔	𑀕	𑀖	𑀗
12	𑀅	𑀅𑀭	𑀅	-	𑀇	𑀈	𑀉	𑀊	𑀋	𑀌	𑀍	𑀎	𑀏	𑀐	𑀑	𑀒	𑀓	𑀔	𑀕	𑀖
13	𑀅	𑀅𑀭	𑀅	-	𑀇	𑀈	𑀉	𑀊	𑀋	𑀌	𑀍	𑀎	-	𑀑	𑀒	𑀓	𑀔	𑀕	𑀖	𑀗

1. Shahbazgarhi and Mansehra R.E. of Aśoka, 3rd century B.C.
2. Indo-Greek Coins, 2nd-1st century B.C.
3. Bajaur casket early inscriptions, 2nd century B.C.
4. Bajaur casket late inscriptions, 1st century B.C.
5. Shahdaur, Mansehra and Fatehjang inscriptions, dated between 60 and 68
6. Taxila copper-plate inscription of Patika, dated the year 78

PLATE XXIIIa

JHA	NA	NO	TA	TI	THA	THAM	DA	DE	DHA	DHI	NA	NAH	TA	TU	THO	THA	DA	DE	DHA	DAH	NA	NU	
-	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	1
JHO	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	2
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10
JHE	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	11
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12
JHI	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	13

7. Takhti-Bahi inscription of Guduvharasa, dated the year 103
8. Mathura Lion Capital inscription of the time of Rajula, early 1st century A.D.
9. Taxila silver scroll inscription of the time of Khushana, dated the year 136
10. Sui Vihar inscription, dated Kaniska? year 11
11. Ara inscription of Kanishka son of Vajheshka, dated Kanishka? year 41
12. Wardak inscription of the reign of Huvishka, dated Kanishka? year 51
13. Kharoshthi from Niya site, about 2nd century A.D.

THE KHAROSHṬHĪ SCRIPT

	PA	PI	PHA	BA	BHA	BHU	MA	MAH	YA	YE	RA	RAH	LA	LI	VA	VO	SA	SAM	SHA	SHU	SA	SO
1	𑀧, 𑀧	𑀧	𑀧. 𑀧	𑀧, 𑀧	𑀧, 𑀧	𑀧, 𑀧	𑀧, 𑀧	𑀧, 𑀧	𑀧, 𑀧	𑀧, 𑀧	𑀧, 𑀧	𑀧, 𑀧	𑀧, 𑀧	𑀧, 𑀧	𑀧, 𑀧	𑀧, 𑀧	𑀧, 𑀧	𑀧, 𑀧	𑀧, 𑀧	𑀧, 𑀧	𑀧, 𑀧	𑀧, 𑀧
	PA	PHI		BI			MA		YA		RA		LI									SA
2	𑀧	𑀧		𑀧			𑀧, 𑀧		𑀧, 𑀧		𑀧, 𑀧		𑀧, 𑀧									𑀧, 𑀧
																						𑀧, 𑀧
3				𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧
																						𑀧
4	𑀧, 𑀧						𑀧, 𑀧	𑀧, 𑀧	𑀧, 𑀧	𑀧, 𑀧	𑀧, 𑀧	𑀧, 𑀧	𑀧, 𑀧	𑀧, 𑀧	𑀧, 𑀧	𑀧, 𑀧	𑀧, 𑀧	𑀧, 𑀧	𑀧, 𑀧	𑀧, 𑀧	𑀧, 𑀧	𑀧, 𑀧
	PI						BHA	BHU	ME	MU	YE	YI	RE	RI	LU	VE	SA	SA	SHA			SA
5	𑀧						𑀧, 𑀧	𑀧, 𑀧	𑀧, 𑀧	𑀧, 𑀧	𑀧, 𑀧	𑀧, 𑀧	𑀧, 𑀧	𑀧, 𑀧	𑀧, 𑀧	𑀧, 𑀧	𑀧, 𑀧	𑀧, 𑀧	𑀧, 𑀧	𑀧, 𑀧	𑀧, 𑀧	𑀧, 𑀧
							BHA	BHU	ME	MI	YA		RA	LI	VE	SI	SE	SHO	SI	SU		𑀧, 𑀧
6	𑀧, 𑀧			𑀧			𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧	𑀧
	PU	PAM					BU	BHA	MO	MAH	YE	YAM	RE	RAM	LI	LU	VA	SI	SO			𑀧
7	𑀧, 𑀧			𑀧					𑀧, 𑀧	𑀧, 𑀧	𑀧, 𑀧	𑀧, 𑀧	𑀧, 𑀧	𑀧, 𑀧	𑀧, 𑀧	𑀧, 𑀧	𑀧, 𑀧	𑀧, 𑀧	𑀧, 𑀧	𑀧, 𑀧	𑀧, 𑀧	𑀧, 𑀧
	PI						BU	BHA	MO	MU	YU	RO	RA	LI	LU	VA	SI	SO	SHA			𑀧
8	𑀧			𑀧					𑀧, 𑀧	𑀧, 𑀧	𑀧, 𑀧	𑀧, 𑀧	𑀧, 𑀧	𑀧, 𑀧	𑀧, 𑀧	𑀧, 𑀧	𑀧, 𑀧	𑀧, 𑀧	𑀧, 𑀧	𑀧, 𑀧	𑀧, 𑀧	𑀧, 𑀧
	PU			BA	BU		BHA	MA	MI	YA			LI	VA	SI	SHA	SA					𑀧
9	𑀧			𑀧, 𑀧					𑀧, 𑀧	𑀧, 𑀧	𑀧, 𑀧	𑀧, 𑀧	𑀧, 𑀧	𑀧, 𑀧	𑀧, 𑀧	𑀧, 𑀧	𑀧, 𑀧	𑀧, 𑀧	𑀧, 𑀧	𑀧, 𑀧	𑀧, 𑀧	𑀧, 𑀧
	PA	PU					BHA	BHI	MAH	YA	RO	LA	VE	SE	SI							𑀧
10	𑀧, 𑀧						𑀧, 𑀧	𑀧, 𑀧	𑀧, 𑀧	𑀧, 𑀧	𑀧, 𑀧	𑀧, 𑀧	𑀧, 𑀧	𑀧, 𑀧	𑀧, 𑀧	𑀧, 𑀧	𑀧, 𑀧	𑀧, 𑀧	𑀧, 𑀧	𑀧, 𑀧	𑀧, 𑀧	𑀧, 𑀧
	PO	PU					BHA	MI	YA	RI	LI	VA										𑀧
11	𑀧, 𑀧								𑀧, 𑀧	𑀧, 𑀧	𑀧, 𑀧	𑀧, 𑀧	𑀧, 𑀧	𑀧, 𑀧	𑀧, 𑀧	𑀧, 𑀧	𑀧, 𑀧	𑀧, 𑀧	𑀧, 𑀧	𑀧, 𑀧	𑀧, 𑀧	𑀧, 𑀧
	PI	PU					BHA	BH'A	MU	M'I	YI	YO	RE	RI	LA	LE	VE	SA	SHA	SI	SAM	𑀧
12	𑀧, 𑀧						𑀧, 𑀧	𑀧, 𑀧	𑀧, 𑀧	𑀧, 𑀧	𑀧, 𑀧	𑀧, 𑀧	𑀧, 𑀧	𑀧, 𑀧	𑀧, 𑀧	𑀧, 𑀧	𑀧, 𑀧	𑀧, 𑀧	𑀧, 𑀧	𑀧, 𑀧	𑀧, 𑀧	𑀧, 𑀧
	PE						BU	BHA	MU	MI	YA	YAM	RI	LI	VI	VO	SA	SE	SHA	SI	S'A	𑀧
13	𑀧			𑀧, 𑀧					𑀧, 𑀧	𑀧, 𑀧	𑀧, 𑀧	𑀧, 𑀧	𑀧, 𑀧	𑀧, 𑀧	𑀧, 𑀧	𑀧, 𑀧	𑀧, 𑀧	𑀧, 𑀧	𑀧, 𑀧	𑀧, 𑀧	𑀧, 𑀧	𑀧, 𑀧

① only in the late coins

1. Shahbazgarhi and Mansehra R.E. of Aśoka, 3rd century B.C.
2. Indo-Greek Coins, 2nd-1st century B.C.
3. Bajaur casket early inscriptions, 2nd century B.C.
4. Bajaur, casket late inscriptions, 1st century B.C.
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HU	HI	KPAṂ	TRA	DRA	PRI	MRU	ŚRU	VRAM	MA	MMA	MYA	BHVE	STI	STRI	STU	SPA	SPI	TYA	
२, २	२	२	२, २	२	२	२, २	२	२	२	२	२	२	२	२	२	२	२	२	1
HA		KRA	TRA	DHRA									STRA				VRI	2	
२, २	२	२	२	२	-	२							२	-	-		२		3
HA	HA			PRA									STI						4
२, २	-	-	-	२	-	२							२	-					5
-	-	-	-	२	-	-							२	-					6
HI		TRA	PRO			RDHA	RMA						STA			SPA			7
२	-	२	२	-	२	२	२	-	२				२	-		२	-		8
HAIṂ		TRA	BHRA			RDHI	RVA												9
२	-	२	२	-	२	२	२	-	२				-	-	-	-	-	-	10
HA						RJHU											VHA		11
2	-	-	-	-	-	२	-	-	-	-	-	-	-	-	-	-	२		12
HE	HI		TRA	BHRA	ŚRA	RVA							STI	STO	SPA				13
२, २	-	२	२	२	२	२	-	-	-	-	-	-	२	२	२	-	-	-	14
HA			PRA			RVA						KIISA				TYA	VHRI		15
2	-	-	२	-	२, २	-						२	-	-	-	२	२		16
HA		TRA	PRA			RVA						SHKA	TŚA	SYA		SHYA			17
2	-	२	२	-	२	-	२	-	२			२	२	२	२	२	-	-	18
HA		TRA			RTHA	RVA	RYA					SHKA	TŚA	TMA			VHA		19
2	-	२	-	-	२	२	२	२	२	२	२	२	२	२	२	-	२		20
HI	HO		STE	PYA	RTHA	RVI	RYA					SHKA	SHTU	SYA		KYA	LYA		21
२, २	-	२	२	२	२	२	२	२	२	२	२	२	२	२	२	२	२	२	1
HI	HA		TRA	PRO	DRA								LPI	SHYA	STA	SYA			22
२	२	-	२	२	२	-							२	२	२	२	२	२	1
२	२												२	२	२	२	२	२	23

② Found in the coins of the Vṛishnis

7. Takhti-Bahi inscription of Guduvharasa, dated the year 103
8. Mathura Lion Capital inscription of the time of Rajula, early 1st century A.D.
9. Taxila silver scroll inscription of the time of Khushana, dated the year 136
10. Sui Vihar inscription, dated Kanishka? year 11
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